



# User Manual

SIRI Web Service

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# 1 Introduction

## 1.1 Preface

The purpose of SIRI Web Service is to act as an entry point for external systems which need information about Train schedules and movements. The SIRI Web Service delivers information about Train, Stops and Associations.

SIRI Web Interface was created to make a gateway for customers to receive train movement and schedule information in standardized way. Transfer bases on XML protocol. SIRI stands for Service Interface for Real Time Information.

This document describes usage of SIRI Web Service, capabilities implemented and availabilities it supports. Major focus in on XML file that describes SIRI 1.0 standard and gives most of the information needed to implement client applications.

After read of this document user supposed to know how to use SIRI Web Service in his own customer application.

## 1.2 Manual Organization

**Chapter 1:** *Introduction:* Information concerning this document.

**Chapter 2:** *System Description:* Short overview of system, purpose and main topics.

**Chapter 3:** *Available Services:* Information about services chosen and implemented from SIRI standard.

**Chapter 4:** *Examples:* Real examples of requests and responses of the services.

**Chapter 5:** *Description of chosen XML elements:* Describes how chosen XML data elements are created and what data can contain. Additionally informs about content of elements put into extensions.

**Chapter 6:** *Creating a consumer:* Instructions on

**Chapter 7:** *Issues:* Some additional information. Explanations.

**Chapter 8:** *Attachments*

## 1.3 Abbreviations Used In This Document

|           |  |
|-----------|--|
| CEN       | European Committee for Standardization                           |
| HTTP/GET  | Hypertext Transfer Protocol / GET method                         |
| HTTP/POST | Hypertext Transfer Protocol / POST method                        |
| REST      | Representational State Transfer                                  |
| SIRI      | Service Interface for Real Time Information                      |
|           | Term used also in reference to SIRI system and SIRI Web Service. |
| URL       | Uniform Resource Locator   |
| WSDL      | Web Services Description Language                                |
| XML       | Extensible Markup Language                                       |

## 1.4 Manual Conventions

Term *Area* refers to set of stations prepared for each customer. Areas are provided by SIRI web service as an extension of standard message. Even more, it appears only in the request as a filtering possibility. SIRI normally supports *Lines* instead of *Areas*, but *Lines* did not exist in train schedules as it is in bus schedule, what SIRI was originally written for. Areas are created manually in database as sets of stations. Then on the basis of Area reference output data can be filtered by those chosen stations to limit result.

But *Lines* still exist in SIRI Web Service application. Whenever a *Line* is defined, its reference ID is used. For example: "L2". Otherwise reference is built as set of two stations for each train: origin and destination. For example: "OSL-LLS". But user has to be aware of that some of trains are associated and take over origin or destination station information from another associated train<sup>1</sup>.

<sup>1</sup> RPS Design Manual.doc, v1.16, 12-12-2005, ch. 2.1.6.4 OF (Form Trains)

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## 1.4.1 Notation

The following section explains the notations used in this manual.

### 1.4.1.1 Text Guidelines

The following section explains the notation used within the text of this manual:

|                     |  |
|---------------------|--|
| <i>Italic Words</i> | They are used to highlight words or sentences of special interest e.g. table names and newly introduced concepts or terms. |
| Code                | XML or telegram definitions and examples   |

## 2 System Description

### 2.1 The SIRI System

This section will give a brief description of the interaction between the SIRI and the customers' systems.

SIRI is an intermediary system between Jernbaneverket servers and external companies interested in information about trains.

SIRI Web Service interface has been created on SIRI system to allow customers receive of information regarding train schedules and movements.

Through the SIRI Web Service interface it is possible to:

- Receive scheduled and train movements from Jernbaneverket (train company)
- Receive changes (delays) to subscribed train lines
- Subscribe for train schedule information and estimated train movements data
- Receive Heartbeat notifications for each subscription confirming that it's active

### 2.2 SIRI

As it stands for Service Interface for Real Time Information, it is used to exchange information about train schedules and movement immediately after each change or just on each customer request.

It is a standard provided by CEN, developed initially by few different countries and organizations. SIRI is a protocol based on XML files for platform independent exchange of data. It is a set of schema files describing how documents transferred between parties has to look like.

SIRI schema files can be downloaded at <http://www.kizoom.com/standards/siri/documentation.htm>.

There is a modified copy attached to this document. And that copy supposed to be used. Most important modifications are:

- correction of namespaces within request and response messages
- put elements to extensions (both requests and deliveries; analyze samples or schemas for details)
- modified types of elements in ClosedTimeRangeStructure from time to dateTime

To send subscription notifications locally stored Consumer WSDL is used. There are read no other published WSDLs.

Implementation of SIRI Web Service uses exchange of xml files within **SOAP** envelopes. Additionally StopMonitoring, VehicleMonitoring, ProductionTimetable and EstimatedTimetable services implement **REST** interface. It means pure SIRI XML payload exchange on HTTP/GET method. Request parameters are placed in URL.

Addressing schema chosen is *implicit*. It means that the endpoint addresses are not exchanged within the SIRI API with an exception of Consumer Notification Address that can be used within subscription request message. The initial endpoint addresses of the service are supplied as part of the configuration. The return address to which the Functional Service should send responses is taken from the http request, i.e. is bound into the transport protocol.

Notifications for subscriptions are sent to server configured address (that supposed to be given by consumer) or the one sent in subscription request.

Access to the server is filtered by IP and requestor reference. First is given by consumer. Second



is agreed and supposed to be a simple name. Access to specific services is also configured by agreement between Producer and Consumer.

SIRI system uses **version 1.0** of SIRI schema files and only such a one is available presently.

Optional elements that are not supported are presently just ignored.

### 2.2.1 Accessing service definition files

If schema files are needed by developer there are two places files are available:

- dynamically published WSDL file and schema files accessed directly from running application instance (for example <http://192.168.67.11:9003/?wsdl>, <http://192.168.67.11:9003/?wsdl=1>, <http://192.168.67.11:9003/?xsd=1> and <http://192.168.67.11:9003/?xsd=2>)
- static schema files SIRI Web Service application was built on

### 3 Available Services

SIRI Web Service application access is available in two ways: SOAP and REST. Both not encoded. Data exchange appears in pure text.

SOAP interface is based on HTTP/POST method where both request and response are sent in XML form. This kind of communication gives opportunity to utilize advances functions of service such as subscriptions. With subscriptions there is possibility to receive real-time changes on system's data. Basic SOAP envelope has to be always created in HTTP messages. See examples in document for details.

REST interface is accessed with HTTP/GET method, which means of usage URL as request. All request parameters are placed directly in URL. Parameters specification can be found further in this chapter. Payload (data) is retrieved in the same form as in SOAP (as XML message). The only difference is that there is no SOAP envelope involved.

Accessing and testing REST interface is moderately easy and can be done with usage even just Internet browser. SOAP interface access requires usage of some software that allows usage of HTTP/POST method. SOAP analyzers can be used for that purpose. Examples are oXygen WSDL Analyzer or SOAPUI, which gives opportunity even to publish consumer service and utilize Publish/Subscribe functionality.

#### 3.1 SOAP interface services

SIRI services implemented in SIRI system as SOAP:

- Production Timetable (request/response pattern)
- Estimated Timetable (request/response and publish/subscribe patterns)
- Stop Monitoring (request/response and publish/subscribe patterns)
- Vehicle Monitoring (request/response and publish/subscribe patterns)

Production Timetable Service transmits daily timetables that include any planned updates that are known about at the time of transmission. Supported optional elements for request:

- ValidityPeriod
- OperatorRef
- AreaRef
- LineRef
- TrainType
- TrainKind

Estimated Timetable Service is used to inform interested schedule information systems of the current status of all known vehicle journeys. Supported optional request elements:

- PreviewInterval
- OperatorRef
- DirectionRef
- AreaRef
- LineRef
- TrainType
- TrainKind

Stop Monitoring Service is used to inform interested schedule information systems of the current status of all known vehicle stops in stop-centric view. Supported optional elements request:

- PreviewInterval
- StartTime
- LineRef
- DestinationRef



- OperatorRef
- DirectionRef
- StopVisitTypes
- MaximumStopVisits
- MinimumStopVisitsPerLine
- MaximumTextLength
- StopMonitoringDetailLevel
- MaximumNumberOfCalls
- TrainKind
- TrainType

Vehicle Monitoring Service is used to inform interested schedule information systems of the current status of all known vehicle journeys in vehicle-centric view. Supported optional request elements:

- VehicleMonitoringRef
- VehicleRef
- LineRef
- DirectionRef (as station code)
- MaximumVehicles
- MaximumNumberOfCalls

Other implemented service methods are:

- CheckStatus
- DeleteSubscription
- GetCapabilities
- Subscribe
- Heartbeat

Heartbeat feature can be turned on for each subscription separately during subscription process. It sends notifications for each subscription on defined time periods. *ProducerRef* field in the payload distinguish for each timetable and subscription notification was sent. It consists of producer reference (“jbv”), timetable (“ProductionTimetable”, “EstimatedTimetable”, “StopMonitoring”, “VehicleMonitoring”) and subscription identifier.

During subscription initialization full payload that matches request is send to Notification Consumer. In case of really big amount of data, multiple messages are sent instead of one.

Refer to GetCapabilities service response example to get information about available services, capabilities and global permissions.

## 3.2 REST interface services

SIRI services implemented in SIRI system as REST:

- Stop Monitoring
- Vehicle Monitoring
- Production Timetable
- Estimated Timetable

If non-ASCII characters used in HTTP/GET URL for REST interface, UTF-8 encoding should be used. By default most of web-browsers encode those characters automatically to UTF-8. For example ‘À’ character can be encoded in URL as ‘%C3%85’.

**Stop Monitoring** Service is used to inform interested schedule information systems of the current status of all known vehicle stops in stop-centric view.

URL to the service is in form:

[http://IP address:\[Port\]/StopMonitoring?MonitoringRef=\[Station code\]\[?Optional parameters\]](http://IP address:[Port]/StopMonitoring?MonitoringRef=[Station code][?Optional parameters])

| Parameter                     | Mandatory    | Description  | Examples   |
|-------------------------------|--------------|--|--|
| MonitoringRef<br>MonitoringID | one of those | 3-letters station's code   | 'OSL'<br>OSL   |
| PreviewInterval               | no           | Forward duration of which Visits should be included.<br>Default: PT1H.                                     | PT24H  |
| StartTime                     | no           | Manually set StartTime of time window of which Visits should be included.<br>Default is current time.      | '2010-03-23T16:00:00+01:00'<br>now()                                 |
| LineRef                       | no           | Filtering results on predefined line ID  | 'L2'<br>L2   |
| DirectionRef                  | no           | Filtering results on destination station code.   | 'GAR'<br>GAR   |
| Platform                      | no           | Filtering results on platform name.  | 5  |
| OperatorRef                   | no           | Filtering results on train operator name.  | 'NSB'<br>NSB   |
| StopVisitTypes                | no           | Whether to include arrivals, departures or all trains (including passing through).<br>Default: departures. | 'arrivals'<br>arrivals<br>'all'<br>all<br>'departures'<br>departures |
| StopVisit                     | no           | Include only stations where train does stop (1; default), or all of the stations (0).                      | 0<br>1   |
| MaximumNumberOfCalls          | no           | Maximum number of calls to be included in response.<br>Default: 30.  | 100  |

**Vehicle Monitoring** Service is used to inform interested schedule information systems of the current status of all known vehicle journeys in vehicle-centric view.

URL to the service is in form:

[http://IP address:\[Port\]/VehicleMonitoring?DatedVehicleJourneyRef=\[Journey reference\]\[?Optional parameters\]](http://IP address:[Port]/VehicleMonitoring?DatedVehicleJourneyRef=[Journey reference][?Optional parameters])

| Parameter              | Mandatory | Description   | Examples             |
|------------------------|-----------|---|----------------------|
| DatedVehicleJourneyRef | yes       | Journey reference in form [Train number]_[Origin date]                                | 127_2010-03-23_18:00 |
| StopPointRef           | no        | Assumes given station as Monitored Call in results.                                   | OSL                  |
| StopVisit              | no        | Include only stations where train does stop (1; default), or all of the stations (0). | 0<br>1               |
| MaximumNumberOfCalls   | no        | Maximum number of calls to be included in response.                                   | 100                  |

**Production Timetable** Service transmits daily timetables that include any planned updates that are known about at the time of transmission. The service is used typically to communicate between Scheduling systems and AVMS systems, and also between AVMS systems and

intelligent clients of the AVMS system. The timetables exchanged should cover all lines covered by the AVMS system. The SIRI Production Timetable Service is also used to transmit the planned interchanges between journeys, including information about the linking of vehicle parts through the interchange, such as whether passengers are able to remain seated in the vehicle

URL to the service is in the form:

[http://\[IP address\]:\[Port\]/ProductionTimetable\[?Optional parameters\]](http://[IP address]:[Port]/ProductionTimetable[?Optional parameters])

| Parameter   | Mandatory | Description  | Examples                  |
|-------------|-----------|--|---------------------------|
| StartPeriod | no        | The (inclusive) start time   | 2010-08-13T16:00:00+01:00 |
| EndPeriod   | no        | The (inclusive) end time   | 2010-08-16T16:00:00+01:00 |
| LineRef     | no        | Filtering results on predefined line ID  | L2                        |
| OperatorRef | no        | Filtering results on train operator name.                                      | NSB                       |
| AreaRef     | no        | Identification of area. It is used to inform requesters about given permission | larea1                    |
| TrainType   | no        | Filtering data on train type   | Lt, Gt                    |
| TrainKind   | no        | Filtering data on kind   | Pt, Gt                    |

**Estimated Timetable Service** is used by the AVMS to inform interested schedule information systems of the status of all known vehicle journeys. This enables the schedule information systems of the current status of all known vehicle journeys. This enables the schedule information system to provide up-to-the-minute information for short-term journey planning. It can also be used to support intelligent displays that calculate the deviation from timetable themselves using a timetable and a real time difference delay by the SIRI Stop Monitoring Service.

URL to the service is in the form:

[http://\[IP address\]:\[Port\]/EstimatedTimetable\[?Optional parameters\]](http://[IP address]:[Port]/EstimatedTimetable[?Optional parameters])

| Parameter       | Mandatory | Description  | Examples |
|-----------------|-----------|--|----------|
| PreviewInterval | no        | Forward duration of which Visits should be included.                           | PT24H    |
| OperatorRef     | no        | Filtering results on train operator name.                                      | NSB      |
| AreaRef         | no        | Identification of area. It is used to inform requesters about given permission | larea1   |
| LineRef         | no        | Filtering results on predefined line ID  | L2       |
| TrainType       | no        | Filtering data on train type   | Lt, Gt   |
| TrainKind       | no        | Filtering data on train kind   | Pt, Gt   |

## 4 Examples

### 4.1 SOAP examples

#### 4.1.1 GetCapabilities

| XML request   | XML response   |
|---|--|
| <pre> &lt;SOAP-ENV:Envelope xmlns:SOAP- ENV="http://schemas.xmlsoap.org/soap/enve lope/"&gt;   &lt;SOAP-ENV:Header/&gt;   &lt;SOAP-ENV:Body&gt;     &lt;oxy:GetCapabilities xmlns:oxy="http://siri.jbv.no"&gt;       &lt;Request&gt;         &lt;RequestorRef xmlns="http://www.siri.org.uk/"&gt;client&lt;/Req uestorRef&gt;  &lt;ProductionTimetableCapabilitiesRequest xmlns="http://www.siri.org.uk/"&gt;  &lt;ParticipantPermissions&gt;true&lt;/ParticipantPe rmissions&gt;  &lt;/ProductionTimetableCapabilitiesRequest&gt;  &lt;EstimatedTimetableCapabilitiesRequest xmlns="http://www.siri.org.uk/"&gt;  &lt;ParticipantPermissions&gt;true&lt;/ParticipantPe rmissions&gt;  &lt;/EstimatedTimetableCapabilitiesRequest&gt;  &lt;StopTimetableCapabilitiesRequest xmlns="http://www.siri.org.uk/"&gt;  &lt;ParticipantPermissions&gt;true&lt;/ParticipantPe rmissions&gt;  &lt;/StopTimetableCapabilitiesRequest&gt;  &lt;StopMonitoringCapabilitiesRequest xmlns="http://www.siri.org.uk/"&gt;  &lt;ParticipantPermissions&gt;true&lt;/ParticipantPe rmissions&gt;  &lt;/StopMonitoringCapabilitiesRequest&gt;  &lt;VehicleMonitoringCapabilitiesRequest xmlns="http://www.siri.org.uk/"&gt;  &lt;ParticipantPermissions&gt;true&lt;/ParticipantPe rmissions&gt;  &lt;/VehicleMonitoringCapabilitiesRequest&gt;  &lt;ConnectionTimetableCapabilitiesRequest xmlns="http://www.siri.org.uk/"&gt;  &lt;ParticipantPermissions&gt;true&lt;/ParticipantPe rmissions&gt;  &lt;/ConnectionTimetableCapabilitiesRequest&gt;  &lt;ConnectionMonitoringCapabilitiesRequest xmlns="http://www.siri.org.uk/"&gt;  &lt;ParticipantPermissions&gt;true&lt;/ParticipantPe                     </pre> | <pre> &lt;?xml version="1.0" ?&gt; &lt;S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"&gt;   &lt;S:Body&gt;     &lt;ns2:GetCapabilitiesResponse xmlns:ns2="http://siri.jbv.no" xmlns:ns3="http://www.siri.org.uk/"&gt;       &lt;Answer&gt;         &lt;ns3:ResponseTimestamp&gt;2010-03- 23T17:55:38+01:00&lt;/ns3:ResponseTimestamp&gt;         &lt;ns3:ProducerRef&gt;jbv&lt;/ns3:ProducerRef&gt;         &lt;ns3:ProductionTimetableCapabilitiesResponse version="1.0"&gt;           &lt;ns3:ResponseTimestamp&gt;2010-03- 23T17:55:38+01:00&lt;/ns3:ResponseTimestamp&gt;           &lt;ns3:ProductionTimetableServiceCapabilities&gt;             &lt;ns3:GeneralInteraction&gt;               &lt;ns3:Interaction&gt;                 &lt;ns3:RequestResponse&gt;true&lt;/ns3:RequestResponse&gt;                 &lt;ns3:PublishSubscribe&gt;false&lt;/ns3:PublishSubscribe&gt;               &lt;/ns3:Interaction&gt;               &lt;ns3:Delivery&gt;                 &lt;ns3:DirectDelivery&gt;true&lt;/ns3:DirectDelivery&gt;                 &lt;ns3:FetchedDelivery&gt;false&lt;/ns3:FetchedDelivery&gt;               &lt;/ns3:Delivery&gt;                 &lt;ns3:MultipartDespatch&gt;false&lt;/ns3:MultipartDespatch&gt;                 &lt;ns3:MultipleSubscriberFilter&gt;false&lt;/ns3:MultipleSubscriberFilter&gt;                 &lt;ns3:HasConfirmDelivery&gt;false&lt;/ns3:HasConfirmDelivery&gt;                 &lt;ns3:HasHeartbeat&gt;true&lt;/ns3:HasHeartbeat&gt;               &lt;/ns3:GeneralInteraction&gt;               &lt;ns3:TransportDescription&gt;  &lt;ns3:CommunicationsTransportMethod&gt;wsdlSoap&lt;/ns3:CommunicationsTransportMethod&gt;               &lt;ns3:CompressionMethod&gt;none&lt;/ns3:CompressionMethod&gt;               &lt;ns3:TransportDescription&gt;                 &lt;ns3:TopicFiltering&gt;                   &lt;ns3:FilterByValidityPeriod&gt;true&lt;/ns3:FilterByValidityPeriod&gt;                   &lt;ns3:FilterByOperatorRef&gt;true&lt;/ns3:FilterByOperatorRef&gt;                   &lt;ns3:FilterByLineRef&gt;true&lt;/ns3:FilterByLineRef&gt;                   &lt;ns3:FilterByVersionRef&gt;false&lt;/ns3:FilterByVersionRef&gt;                 &lt;/ns3:TopicFiltering&gt;                 &lt;ns3:RequestPolicy&gt;                   &lt;ns3:NationalLanguage&gt;no&lt;/ns3:NationalLanguage&gt;                   &lt;ns3:GmlCoordinateFormat/&gt;                 &lt;/ns3:RequestPolicy&gt;                 &lt;ns3:AccessControl&gt;                   &lt;ns3:RequestChecking&gt;true&lt;/ns3:RequestChecking&gt;                   &lt;ns3:CheckOperatorRef&gt;true&lt;/ns3:CheckOperatorRef&gt;                   &lt;ns3:CheckLineRef&gt;false&lt;/ns3:CheckLineRef&gt;                   &lt;ns3:CheckConnectionLinkRef&gt;false&lt;/ns3:CheckConnectionLinkRef&gt;                 &lt;/ns3:AccessControl&gt;               &lt;/ns3:ProductionTimetableServiceCapabilities&gt;               &lt;ns3:ProductionTimetablePermissions&gt;                 &lt;ns3:PermissionVersionRef&gt;1.0&lt;/ns3:PermissionVersionRef&gt;                 &lt;ns3:ProductionTimetablePermission&gt;                   &lt;ns3:ParticipantRef&gt;client&lt;/ns3:ParticipantRef&gt;                   &lt;ns3:GeneralCapabilities&gt;                     &lt;ns3:RequestResponse&gt;true&lt;/ns3:RequestResponse&gt;                     &lt;ns3:PublishSubscribe&gt;false&lt;/ns3:PublishSubscribe&gt;                   &lt;/ns3:GeneralCapabilities&gt;                   &lt;ns3:OperatorPermissions&gt;                     &lt;ns3:OperatorPermission&gt;                       &lt;ns3:Allow&gt;true&lt;/ns3:Allow&gt;                       &lt;ns3:OperatorRef&gt;NSB&lt;/ns3:OperatorRef&gt;                     &lt;/ns3:OperatorPermission&gt;                   &lt;/ns3:OperatorPermissions&gt;                 &lt;/ns3:ProductionTimetablePermissions&gt;               &lt;/ns3:ProductionTimetableServiceCapabilities&gt;             &lt;/ns3:ProductionTimetableServiceCapabilities&gt;           &lt;/ns3:ProductionTimetableCapabilitiesResponse&gt;         &lt;/ns3:Answer&gt;       &lt;/ns2:GetCapabilitiesResponse&gt;     &lt;/S:Body&gt;   &lt;/S:Envelope&gt;                     </pre> |

|   |  |
|---|--|
| <pre> rmissions&gt; &lt;/ConnectionMonitoringCapabilitiesRequest &gt; &lt;GeneralMessageCapabilitiesRequest xmlns="http://www.siri.org.uk/"&gt; &lt;ParticipantPermissions&gt;true&lt;/ParticipantPe rmissions&gt; &lt;/GeneralMessageCapabilitiesRequest&gt;   &lt;Request&gt;     &lt;RequestExtension/&gt;   &lt;/oxy:GetCapabilities&gt; &lt;/SOAP-ENV:Body&gt; &lt;/SOAP-ENV:Envelope&gt;                 </pre> | <pre>                 &lt;ns3:AllowAll&gt;true&lt;/ns3:AllowAll&gt;                 &lt;/ns3:LinePermissions&gt;                 &lt;ns3:ConnectionLinkPermissions&gt;                   &lt;ns3:AllowAll&gt;true&lt;/ns3:AllowAll&gt;                 &lt;/ns3:ConnectionLinkPermissions&gt;                 &lt;/ns3:ProductionTimetablePermission&gt;                 &lt;/ns3:ProductionTimetablePermissions&gt;                 &lt;/ns3:ProductionTimetableCapabilitiesResponse&gt;                 &lt;ns3:EstimatedTimetableCapabilitiesResponse version="1.0"&gt;                   &lt;ns3:ResponseTimestamp&gt;2010-03-                 23T17:55:38+01:00&lt;/ns3:ResponseTimestamp&gt;                   &lt;ns3:EstimatedTimetableServiceCapabilities&gt;                     &lt;ns3:GeneralInteraction&gt;                       &lt;ns3:Interaction&gt;                         &lt;ns3:RequestResponse&gt;true&lt;/ns3:RequestResponse&gt;                         &lt;ns3:PublishSubscribe&gt;true&lt;/ns3:PublishSubscribe&gt;                       &lt;/ns3:Interaction&gt;                     &lt;ns3:Delivery&gt;                       &lt;ns3:DirectDelivery&gt;true&lt;/ns3:DirectDelivery&gt;                       &lt;ns3:FetchedDelivery&gt;&gt;false&lt;/ns3:FetchedDelivery&gt;                     &lt;/ns3:Delivery&gt;                     &lt;ns3:MultipartDespatch&gt;&gt;false&lt;/ns3:MultipartDespatch&gt;                     &lt;ns3:MultipleSubscriberFilter&gt;&gt;false&lt;/ns3:MultipleSubscriberFilter&gt;                     &lt;ns3:HasConfirmDelivery&gt;&gt;false&lt;/ns3:HasConfirmDelivery&gt;                     &lt;ns3:HasHeartbeat&gt;true&lt;/ns3:HasHeartbeat&gt;                     &lt;ns3:VisitNumberisOrder&gt;&gt;false&lt;/ns3:VisitNumberisOrder&gt;                   &lt;/ns3:GeneralInteraction&gt;                 &lt;ns3:TransportDescription&gt;                  &lt;ns3:CommunicationsTransportMethod&gt;wsdlSoap&lt;/ns3:CommunicationsTransportMethod&gt;                 &lt;ns3:CompressionMethod&gt;none&lt;/ns3:CompressionMethod&gt;                 &lt;/ns3:TransportDescription&gt;                 &lt;ns3:TopicFiltering&gt;                  &lt;ns3:DefaultPreviewInterval&gt;P0Y0M0DT1H0M0.000S&lt;/ns3:DefaultPreviewInterval&gt;                 &lt;ns3:FilterByOperatorRef&gt;true&lt;/ns3:FilterByOperatorRef&gt;                 &lt;ns3:FilterByLineRef&gt;true&lt;/ns3:FilterByLineRef&gt;                 &lt;ns3:FilterByVersionRef&gt;&gt;false&lt;/ns3:FilterByVersionRef&gt;                 &lt;/ns3:TopicFiltering&gt;                 &lt;ns3:RequestPolicy&gt;                   &lt;ns3:NationalLanguage&gt;no&lt;/ns3:NationalLanguage&gt;                   &lt;ns3:GmlCoordinateFormat/&gt;                 &lt;/ns3:RequestPolicy&gt;                 &lt;ns3:SubscriptionPolicy&gt;                   &lt;ns3:HasIncrementalUpdates&gt;true&lt;/ns3:HasIncrementalUpdates&gt;                   &lt;ns3:HasChangeSensitivity&gt;true&lt;/ns3:HasChangeSensitivity&gt;                 &lt;/ns3:SubscriptionPolicy&gt;                 &lt;ns3:AccessControl&gt;                   &lt;ns3:RequestChecking&gt;true&lt;/ns3:RequestChecking&gt;                   &lt;ns3:CheckOperatorRef&gt;true&lt;/ns3:CheckOperatorRef&gt;                   &lt;ns3:CheckLineRef&gt;&gt;false&lt;/ns3:CheckLineRef&gt;                   &lt;ns3:CheckConnectionLinkRef&gt;&gt;false&lt;/ns3:CheckConnectionLinkRef&gt;                 &lt;/ns3:AccessControl&gt;                 &lt;/ns3:EstimatedTimetableServiceCapabilities&gt;                 &lt;ns3:EstimatedTimetablePermissions&gt;                   &lt;ns3:PermissionVersionRef&gt;1.0&lt;/ns3:PermissionVersionRef&gt;                 &lt;/ns3:EstimatedTimetablePermission&gt;                   &lt;ns3:ParticipantRef&gt;client&lt;/ns3:ParticipantRef&gt;                 &lt;ns3:GeneralCapabilities&gt;                   &lt;ns3:RequestResponse&gt;true&lt;/ns3:RequestResponse&gt;                   &lt;ns3:PublishSubscribe&gt;true&lt;/ns3:PublishSubscribe&gt;                 &lt;/ns3:GeneralCapabilities&gt;                 &lt;ns3:OperatorPermissions&gt;                   &lt;ns3:OperatorPermission&gt;                     &lt;ns3:Allow&gt;true&lt;/ns3:Allow&gt;                     &lt;ns3:OperatorRef&gt;NSB&lt;/ns3:OperatorRef&gt;                   &lt;/ns3:OperatorPermission&gt;                 &lt;/ns3:OperatorPermissions&gt;                 &lt;ns3:LinePermissions&gt;                   &lt;ns3:AllowAll&gt;true&lt;/ns3:AllowAll&gt;                 &lt;/ns3:LinePermissions&gt;                 &lt;ns3:ConnectionLinkPermissions&gt;                   &lt;ns3:AllowAll&gt;true&lt;/ns3:AllowAll&gt;                 &lt;/ns3:ConnectionLinkPermissions&gt;                 </pre> |
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|  | <pre>                 &lt;/ns3:EstimatedTimetablePermission&gt;             &lt;/ns3:EstimatedTimetablePermissions&gt;         &lt;/ns3:EstimatedTimetableCapabilitiesResponse&gt;         &lt;ns3:StopTimetableCapabilitiesResponse version="1.0"&gt;             &lt;ns3:ResponseTimestamp&gt;2010-03- 23T17:55:38+01:00&lt;/ns3:ResponseTimestamp&gt;             &lt;ns3:Status&gt;&gt;false&lt;/ns3:Status&gt;             &lt;ns3:ErrorCondition&gt;                 &lt;ns3:CapabilityNotSupportedError&gt;                     &lt;ns3:CapabilityRef&gt;NotImplemented&lt;/ns3:CapabilityRef&gt;                 &lt;/ns3:CapabilityNotSupportedError&gt;                 &lt;ns3:Description&gt;NotImplemented&lt;/ns3:Description&gt;             &lt;/ns3:ErrorCondition&gt;         &lt;/ns3:StopTimetableCapabilitiesResponse&gt;         &lt;ns3:StopMonitoringCapabilitiesResponse version="1.0"&gt;             &lt;ns3:ResponseTimestamp&gt;2010-03- 23T17:55:38+01:00&lt;/ns3:ResponseTimestamp&gt;             &lt;ns3:Status&gt;&gt;true&lt;/ns3:Status&gt;             &lt;ns3:StopMonitoringServiceCapabilities&gt;                 &lt;ns3:GeneralInteraction&gt;                     &lt;ns3:Interaction&gt;                         &lt;ns3:RequestResponse&gt;&gt;true&lt;/ns3:RequestResponse&gt;                         &lt;ns3:PublishSubscribe&gt;true&lt;/ns3:PublishSubscribe&gt;                     &lt;/ns3:Interaction&gt;                     &lt;ns3:Delivery&gt;                         &lt;ns3:DirectDelivery&gt;true&lt;/ns3:DirectDelivery&gt;                         &lt;ns3:FetchDelivery&gt;&gt;false&lt;/ns3:FetchDelivery&gt;                     &lt;/ns3:Delivery&gt;                     &lt;ns3:MultipartDespatch&gt;&gt;false&lt;/ns3:MultipartDespatch&gt;                     &lt;ns3:MultipleSubscriberFilter&gt;&gt;false&lt;/ns3:MultipleSubscriberFilter&gt;                     &lt;ns3:HasConfirmDelivery&gt;&gt;false&lt;/ns3:HasConfirmDelivery&gt;                     &lt;ns3:HasHeartbeat&gt;true&lt;/ns3:HasHeartbeat&gt;                     &lt;ns3:VisitNumberisOrder&gt;&gt;false&lt;/ns3:VisitNumberisOrder&gt;                 &lt;/ns3:GeneralInteraction&gt;                 &lt;ns3:TransportDescription&gt;              &lt;/ns3:StopMonitoringServiceCapabilities&gt;             &lt;ns3:CommunicationsTransportMethod&gt;wsdlSoap&lt;/ns3:CommunicationsTransportMethod&gt;             &lt;ns3:CompressionMethod&gt;none&lt;/ns3:CompressionMethod&gt;             &lt;/ns3:TransportDescription&gt;             &lt;ns3:TopicFiltering&gt;              &lt;ns3:DefaultPreviewInterval&gt;P0Y0M0DT1H0M0.000S&lt;/ns3:DefaultPreviewInterval&gt;             &lt;ns3:FilterByMonitoringRef&gt;true&lt;/ns3:FilterByMonitoringRef&gt;             &lt;ns3:FilterByLineRef&gt;true&lt;/ns3:FilterByLineRef&gt;             &lt;ns3:FilterByDirectionRef&gt;true&lt;/ns3:FilterByDirectionRef&gt;             &lt;ns3:FilterByDestination&gt;true&lt;/ns3:FilterByDestination&gt;             &lt;ns3:FilterByVisitType&gt;true&lt;/ns3:FilterByVisitType&gt;             &lt;/ns3:TopicFiltering&gt;             &lt;ns3:RequestPolicy&gt;                 &lt;ns3:NationalLanguage&gt;no&lt;/ns3:NationalLanguage&gt;                 &lt;ns3:GmlCoordinateFormat/&gt;                 &lt;ns3:UseReferences&gt;true&lt;/ns3:UseReferences&gt;                 &lt;ns3:UseNames&gt;&gt;false&lt;/ns3:UseNames&gt;                 &lt;ns3:HasDetailLevel&gt;&gt;false&lt;/ns3:HasDetailLevel&gt;                 &lt;ns3:HasMaximumVisits&gt;true&lt;/ns3:HasMaximumVisits&gt;             &lt;/ns3:RequestPolicy&gt;             &lt;ns3:SubscriptionPolicy&gt;                 &lt;ns3:HasIncrementalUpdates&gt;true&lt;/ns3:HasIncrementalUpdates&gt;                 &lt;ns3:HasChangeSensitivity&gt;true&lt;/ns3:HasChangeSensitivity&gt;             &lt;/ns3:SubscriptionPolicy&gt;             &lt;ns3:AccessControl&gt;                 &lt;ns3:RequestChecking&gt;true&lt;/ns3:RequestChecking&gt;                 &lt;ns3:CheckOperatorRef&gt;true&lt;/ns3:CheckOperatorRef&gt;                 &lt;ns3:CheckLineRef&gt;&gt;false&lt;/ns3:CheckLineRef&gt;                 &lt;ns3:CheckMonitoringRef&gt;true&lt;/ns3:CheckMonitoringRef&gt;             &lt;/ns3:AccessControl&gt;             &lt;ns3:ResponseFeatures&gt;                 &lt;ns3:HasLineNotices&gt;&gt;false&lt;/ns3:HasLineNotices&gt;             &lt;/ns3:ResponseFeatures&gt;         &lt;/ns3:StopMonitoringServiceCapabilities&gt;         &lt;ns3:StopMonitoringPermissions&gt;             &lt;ns3:StopMonitoringPermission&gt;                 &lt;ns3:ParticipantRef&gt;client&lt;/ns3:ParticipantRef&gt;             &lt;/ns3:StopMonitoringPermission&gt;         &lt;/ns3:StopMonitoringPermissions&gt;         &lt;ns3:GeneralCapabilities&gt;     </pre> |
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|  | <pre>&lt;ns3:RequestResponse&gt;true&lt;/ns3:RequestResponse&gt; &lt;ns3:PublishSubscribe&gt;true&lt;/ns3:PublishSubscribe&gt; &lt;/ns3:GeneralCapabilities&gt; &lt;ns3:OperatorPermissions&gt;   &lt;ns3:AllowAll&gt;true&lt;/ns3:AllowAll&gt; &lt;/ns3:OperatorPermissions&gt; &lt;ns3:LinePermissions&gt;   &lt;ns3:AllowAll&gt;true&lt;/ns3:AllowAll&gt; &lt;/ns3:LinePermissions&gt; &lt;ns3:StopMonitorPermissions&gt;   &lt;ns3:AllowAll&gt;true&lt;/ns3:AllowAll&gt; &lt;/ns3:StopMonitorPermissions&gt; &lt;/ns3:StopMonitoringPermission&gt; &lt;/ns3:StopMonitoringPermissions&gt; &lt;/ns3:StopMonitoringCapabilitiesResponse&gt; &lt;ns3:VehicleMonitoringCapabilitiesResponse version="1.0"&gt;   &lt;ns3:ResponseTimestamp&gt;2010-03- 23T17:55:38+01:00&lt;/ns3:ResponseTimestamp&gt;   &lt;ns3:Status&gt;true&lt;/ns3:Status&gt;   &lt;ns3:VehicleMonitoringServiceCapabilities&gt;     &lt;ns3:GeneralInteraction&gt;       &lt;ns3:Interaction&gt;         &lt;ns3:RequestResponse&gt;true&lt;/ns3:RequestResponse&gt;         &lt;ns3:PublishSubscribe&gt;true&lt;/ns3:PublishSubscribe&gt;       &lt;/ns3:Interaction&gt;       &lt;ns3:Delivery&gt;         &lt;ns3:DirectDelivery&gt;true&lt;/ns3:DirectDelivery&gt;         &lt;ns3:FetchedDelivery&gt;&gt;false&lt;/ns3:FetchedDelivery&gt;       &lt;/ns3:Delivery&gt;       &lt;ns3:MultipartDespatch&gt;&gt;false&lt;/ns3:MultipartDespatch&gt;       &lt;ns3:MultipleSubscriberFilter&gt;&gt;false&lt;/ns3:MultipleSubscriberFilter&gt;       &lt;ns3:HasConfirmDelivery&gt;&gt;false&lt;/ns3:HasConfirmDelivery&gt;       &lt;ns3:HasHeartbeat&gt;true&lt;/ns3:HasHeartbeat&gt;       &lt;ns3:VisitNumberisOrder&gt;&gt;false&lt;/ns3:VisitNumberisOrder&gt;     &lt;/ns3:GeneralInteraction&gt;     &lt;ns3:TransportDescription&gt;  &lt;ns3:CommunicationsTransportMethod&gt;wsdlSoap&lt;/ns3:CommunicationsTransportMethod&gt;   &lt;ns3:CompressionMethod&gt;none&lt;/ns3:CompressionMethod&gt;   &lt;/ns3:TransportDescription&gt;   &lt;ns3:TopicFiltering&gt;  &lt;ns3:FilterByVehicleMonitoringRef&gt;true&lt;/ns3:FilterByVehicleMonitoringRef&gt;   &lt;ns3:FilterByVehicleRef&gt;true&lt;/ns3:FilterByVehicleRef&gt;   &lt;ns3:FilterByLineRef&gt;true&lt;/ns3:FilterByLineRef&gt;   &lt;ns3:FilterByDirectionRef&gt;true&lt;/ns3:FilterByDirectionRef&gt; &lt;/ns3:TopicFiltering&gt; &lt;ns3:RequestPolicy&gt;   &lt;ns3:NationalLanguage&gt;no&lt;/ns3:NationalLanguage&gt;   &lt;ns3:GmlCoordinateFormat/&gt;   &lt;ns3:HasDetailLevel&gt;&gt;false&lt;/ns3:HasDetailLevel&gt;   &lt;ns3:HasMaximumVehicles&gt;true&lt;/ns3:HasMaximumVehicles&gt;   &lt;ns3:HasNumberOfOnwardsCalls&gt;true&lt;/ns3:HasNumberOfOnwardsCalls&gt;   &lt;ns3:HasNumberOfPreviousCalls&gt;true&lt;/ns3:HasNumberOfPreviousCalls&gt; &lt;/ns3:RequestPolicy&gt; &lt;ns3:SubscriptionPolicy&gt;   &lt;ns3:HasIncrementalUpdates&gt;true&lt;/ns3:HasIncrementalUpdates&gt;   &lt;ns3:HasChangeSensitivity&gt;true&lt;/ns3:HasChangeSensitivity&gt; &lt;/ns3:SubscriptionPolicy&gt; &lt;ns3:AccessControl&gt;   &lt;ns3:RequestChecking&gt;true&lt;/ns3:RequestChecking&gt;   &lt;ns3:CheckOperatorRef&gt;true&lt;/ns3:CheckOperatorRef&gt;   &lt;ns3:CheckLineRef&gt;&gt;false&lt;/ns3:CheckLineRef&gt;  &lt;ns3:CheckVehicleMonitoringRef&gt;&gt;false&lt;/ns3:CheckVehicleMonitoringRef&gt;   &lt;/ns3:AccessControl&gt;   &lt;ns3:ResponseFeatures&gt;     &lt;ns3:HasLocation&gt;&gt;false&lt;/ns3:HasLocation&gt;   &lt;/ns3:ResponseFeatures&gt; &lt;/ns3:VehicleMonitoringServiceCapabilities&gt; &lt;ns3:VehicleMonitoringPermissions&gt;   &lt;ns3:PermissionVersionRef&gt;1.0&lt;/ns3:PermissionVersionRef&gt;   &lt;ns3:VehicleMonitoringPermission&gt;     &lt;ns3:ParticipantRef&gt;client&lt;/ns3:ParticipantRef&gt;</pre> |
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|  | <pre>                 &lt;ns3:GeneralCapabilities&gt;                 &lt;ns3:RequestResponse&gt;true&lt;/ns3:RequestResponse&gt;                 &lt;ns3:PublishSubscribe&gt;false&lt;/ns3:PublishSubscribe&gt;             &lt;/ns3:GeneralCapabilities&gt;             &lt;ns3:OperatorPermissions&gt;             &lt;ns3:AllowAll&gt;true&lt;/ns3:AllowAll&gt;             &lt;/ns3:OperatorPermissions&gt;             &lt;ns3:LinePermissions&gt;             &lt;ns3:AllowAll&gt;true&lt;/ns3:AllowAll&gt;             &lt;/ns3:LinePermissions&gt;             &lt;ns3:VehicleMonitoringPermissions&gt;             &lt;ns3:AllowAll&gt;true&lt;/ns3:AllowAll&gt;             &lt;/ns3:VehicleMonitoringPermissions&gt;             &lt;/ns3:VehicleMonitoringPermissions&gt;             &lt;/ns3:VehicleMonitoringPermissions&gt;             &lt;/ns3:VehicleMonitoringCapabilitiesResponse&gt;             &lt;ns3:ConnectionTimetableCapabilitiesResponse version="1.0"&gt;             &lt;ns3:ResponseTimestamp&gt;2010-03- 23T17:55:38+01:00&lt;/ns3:ResponseTimestamp&gt;             &lt;ns3:Status&gt;false&lt;/ns3:Status&gt;             &lt;ns3:ErrorCondition&gt;             &lt;ns3:CapabilityNotSupportedError&gt;             &lt;ns3:CapabilityRef&gt;NotImplemented&lt;/ns3:CapabilityRef&gt;             &lt;/ns3:CapabilityNotSupportedError&gt;             &lt;/ns3:ErrorCondition&gt;             &lt;/ns3:ConnectionTimetableCapabilitiesResponse&gt;             &lt;ns3:ConnectionMonitoringCapabilitiesResponse version="1.0"&gt;             &lt;ns3:ResponseTimestamp&gt;2010-03- 23T17:55:38+01:00&lt;/ns3:ResponseTimestamp&gt;             &lt;ns3:Status&gt;false&lt;/ns3:Status&gt;             &lt;ns3:ErrorCondition&gt;             &lt;ns3:CapabilityNotSupportedError&gt;             &lt;ns3:CapabilityRef&gt;NotImplemented&lt;/ns3:CapabilityRef&gt;             &lt;/ns3:CapabilityNotSupportedError&gt;             &lt;/ns3:ErrorCondition&gt;             &lt;/ns3:ConnectionMonitoringCapabilitiesResponse&gt;             &lt;ns3:GeneralMessageCapabilitiesResponse version="1.0"&gt;             &lt;ns3:ResponseTimestamp&gt;2010-03- 23T17:55:38+01:00&lt;/ns3:ResponseTimestamp&gt;             &lt;ns3:Status&gt;false&lt;/ns3:Status&gt;             &lt;ns3:ErrorCondition&gt;             &lt;ns3:CapabilityNotSupportedError&gt;             &lt;ns3:CapabilityRef&gt;NotImplemented&lt;/ns3:CapabilityRef&gt;             &lt;/ns3:CapabilityNotSupportedError&gt;             &lt;/ns3:ErrorCondition&gt;             &lt;/ns3:GeneralMessageCapabilitiesResponse&gt;         &lt;/Answer&gt;         &lt;AnswerExtension/&gt;         &lt;/ns2:GetCapabilitiesResponse&gt;     &lt;/S:Body&gt; &lt;/S:Envelope&gt;             </pre> |
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#### 4.1.2 CheckStatus

| XML request  | XML response  |
|--|---|
| <pre> &lt;SOAP-ENV:Envelope   xmlns:SOAP-   ENV="http://schemas.xmlsoap.org/soap/en   velope/"&gt;   &lt;SOAP-ENV:Header/&gt;   &lt;SOAP-ENV:Body&gt;     &lt;oxy:CheckStatus       xmlns:oxy="http://siri.jbv.no"&gt;       &lt;Request&gt;         &lt;RequestorRef           xmlns="http://www.siri.org.uk/"           &gt;ReqRef&lt;/RequestorRef&gt;         &lt;/Request&gt;       &lt;/oxy:CheckStatus&gt;     &lt;/SOAP-ENV:Body&gt;   &lt;/SOAP-ENV:Envelope&gt;             </pre> | <pre> &lt;?xml version="1.0" ?&gt; &lt;S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"&gt;   &lt;S:Body&gt;     &lt;ns2:CheckStatusResponse xmlns:ns2="http://siri.jbv.no"       xmlns:ns3="http://www.siri.org.uk"&gt;       &lt;CheckStatusAnswerInfo&gt;         &lt;ns3:ResponseTimestamp&gt;           2009-02-10T09:46:40+01:00         &lt;/ns3:ResponseTimestamp&gt;         &lt;ns3:ProducerRef&gt;jbv&lt;/ns3:ProducerRef&gt;         &lt;ns3:Status&gt;true&lt;/ns3:Status&gt;       &lt;/CheckStatusAnswerInfo&gt;     &lt;/Answer&gt;     &lt;ns3:Status&gt;true&lt;/ns3:Status&gt;     &lt;ns3:ServiceStartTime&gt;       2009-02-10T09:07:58+01:00     &lt;/ns3:ServiceStartTime&gt;             </pre> |



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|  | <pre> &lt;/Answer&gt; &lt;AnswerExtension/&gt; &lt;/ns2:CheckStatusResponse&gt; &lt;/S:Body&gt; &lt;/S:Envelope&gt;                     </pre> |
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### 4.1.3 GetProductionTimetable

| XML request  | XML response  |
|--|---|
| <pre> &lt;SOAP-ENV:Envelope   xmlns:SOAP-   ENV="http://schemas.xmlsoap.org/soap/en   velope/"&gt;   &lt;SOAP-ENV:Header/&gt;   &lt;SOAP-ENV:Body&gt;     &lt;oxy:GetProductionTimetable       xmlns:oxy="http://siri.jbv.no"&gt;       &lt;ServiceRequestInfo&gt;         &lt;RequestorRef           xmlns="http://www.siri.org.uk"           &gt;SIRITest&lt;/RequestorRef&gt;         &lt;/ServiceRequestInfo&gt;         &lt;Request&gt;         &lt;/Request&gt;         &lt;RequestExtension/&gt;       &lt;/oxy:GetProductionTimetable&gt;     &lt;/SOAP-ENV:Body&gt;   &lt;/SOAP-ENV:Envelope&gt;                     </pre> | <pre> &lt;?xml version="1.0" ?&gt; &lt;S:Envelope   xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"&gt;   &lt;S:Body&gt;     &lt;ns2:GetProductionTimetableResponse       xmlns:ns2="http://siri.jbv.no"       xmlns:ns3="http://www.siri.org.uk"&gt;       &lt;ServiceDeliveryInfo&gt;         &lt;ns3:ResponseTimestamp&gt;2009-02-         15T23:47:03+01:00&lt;/ns3:ResponseTimestamp&gt;         &lt;ns3:ProducerRef&gt;jbv&lt;/ns3:ProducerRef&gt;       &lt;/ServiceDeliveryInfo&gt;       &lt;Answer&gt;         &lt;ns3:ProductionTimetableDelivery           version="1.0"&gt;           &lt;ns3:ResponseTimestamp&gt;2009-02-           15T23:47:03+01:00&lt;/ns3:ResponseTimestamp&gt;           &lt;ns3:Status&gt;&gt;false&lt;/ns3:Status&gt;           &lt;ns3:ErrorCondition&gt;             &lt;ns3:OtherError&gt;               &lt;ns3:ErrorText&gt;Consumer reached limit for response size. Limit your               request by filters or contact system administrator.&lt;/ns3:ErrorText&gt;             &lt;/ns3:OtherError&gt;           &lt;/ns3:ErrorCondition&gt;           &lt;ns3:DatedTimetableVersionFrame&gt;             &lt;ns3:RecordedAtTime&gt;2009-02-15T23:47:03+01:00&lt;/ns3:RecordedAtTime&gt;             &lt;ns3:LineRef&gt;L2&lt;/ns3:LineRef&gt;             &lt;ns3:DirectionRef&gt;DE1&lt;/ns3:DirectionRef&gt;             &lt;ns3:OperatorRef&gt;SIRICOM2&lt;/ns3:OperatorRef&gt;             &lt;ns3:ProductCategoryRef&gt;STYP&lt;/ns3:ProductCategoryRef&gt;             &lt;ns3:ServiceFeatureRef&gt;SKI&lt;/ns3:ServiceFeatureRef&gt;             &lt;ns3:DestinationDisplay&gt;SIRI Destination 1&lt;/ns3:DestinationDisplay&gt;             &lt;ns3:Monitored&gt;true&lt;/ns3:Monitored&gt;             &lt;ns3:DatedVehicleJourney&gt;               &lt;ns3:DatedVehicleJourneyCode                 &gt;SIRI5_2009-02-15_19:00&lt;/ns3:DatedVehicleJourneyCode&gt;               &lt;ns3:Cancellation&gt;&gt;false&lt;/ns3:Cancellation&gt;               &lt;ns3:VehicleMode&gt;rail&lt;/ns3:VehicleMode&gt;               &lt;ns3:OperatorRef&gt;SIRICOM2&lt;/ns3:OperatorRef&gt;               &lt;ns3:ProductCategoryRef&gt;STYP&lt;/ns3:ProductCategoryRef&gt;               &lt;ns3:ServiceFeatureRef&gt;SKI&lt;/ns3:ServiceFeatureRef&gt;               &lt;ns3:DestinationDisplay&gt;SIRI Destination 1&lt;/ns3:DestinationDisplay&gt;               &lt;ns3:Monitored&gt;true&lt;/ns3:Monitored&gt;             &lt;/ns3:DatedCall&gt;               &lt;ns3:StopPointRef&gt;OR1&lt;/ns3:StopPointRef&gt;               &lt;ns3:VisitNumber&gt;1&lt;/ns3:VisitNumber&gt;               &lt;ns3:StopPointName&gt;SIRI Origin 1&lt;/ns3:StopPointName&gt;               &lt;ns3:RequestStop&gt;&gt;false&lt;/ns3:RequestStop&gt;               &lt;ns3:DestinationDisplay&gt;SIRI Destination 1&lt;/ns3:DestinationDisplay&gt;               &lt;ns3:CallNote&gt;Flytoget&lt;/ns3:CallNote&gt;               &lt;ns3:AimedArrivalTime&gt;2009-02-               15T18:58:00+01:00&lt;/ns3:AimedArrivalTime&gt;               &lt;ns3:ArrivalPlatformName&gt;2&lt;/ns3:ArrivalPlatformName&gt;               &lt;ns3:ArrivalBoardingActivity&gt;noAlighting&lt;/ns3:               ArrivalBoardingActivity&gt;               &lt;ns3:AimedDepartureTime&gt;2009-02-               15T19:00:00+01:00&lt;/ns3:AimedDepartureTime&gt;               &lt;ns3:DeparturePlatformName&gt;S0&lt;/ns3:DeparturePlatformName&gt;               &lt;ns3:DepartureBoardingActivity&gt;passThru             &lt;/ns3:DepartureBoardingActivity&gt;             &lt;ns3:Extensions&gt;               &lt;ns3:CallMonitored&gt;true&lt;/ns3:CallMonitored&gt;               &lt;ns3:DataSource&gt;CTRIGGER&lt;/ns3:DataSource&gt;               &lt;ns3:TrainBecomes&gt;SIRI6_2009-02-15_00:00&lt;/ns3:TrainBecomes&gt;               &lt;ns3:StopsAtAirport&gt;&gt;false&lt;/ns3:StopsAtAirport&gt;           &lt;/ns3:ProductionTimetableDelivery&gt;         &lt;/Answer&gt;       &lt;/ns2:GetProductionTimetableResponse&gt;     &lt;/S:Body&gt;   &lt;/S:Envelope&gt;                     </pre> |

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|  | <pre> &lt;/ns3:Extensions&gt; &lt;/ns3:DatedCall&gt; &lt;ns3:Extensions&gt;   &lt;ns3:TrainNumber&gt;SIRI5&lt;/ns3:TrainNumber&gt;   &lt;ns3:TrainKind&gt;SKI&lt;/ns3:TrainKind&gt;   &lt;ns3:TrainType&gt;STYP&lt;/ns3:TrainType&gt;   &lt;ns3:OriginCity&gt;     &lt;ns3:CityCode&gt;OR1&lt;/ns3:CityCode&gt;     &lt;ns3:CityName&gt;SIRI Origin 1&lt;/ns3:CityName&gt;   &lt;/ns3:OriginCity&gt; &lt;/ns3:Extensions&gt; &lt;/ns3:DatedVehicleJourney&gt; &lt;/ns3:DatedTimetableVersionFrame&gt; &lt;/ns3:ProductionTimetableDelivery&gt; &lt;/Answer&gt; &lt;AnswerExtension/&gt; &lt;/ns2:GetProductionTimetableResponse&gt; &lt;/S:Body&gt; &lt;/S:Envelope&gt; </pre> |
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#### 4.1.4 GetEstimatedTimetable

| XML request   | XML response  |
|---|---|
| <pre> &lt;SOAP-ENV:Envelope   xmlns:SOAP-   ENV="http://schemas.xmlsoap.org/soap/en   velope/"&gt;   &lt;SOAP-ENV:Header/&gt;   &lt;SOAP-ENV:Body&gt;     &lt;oxy:GetEstimatedTimetable       xmlns:oxy="http://siri.jbv.no"&gt;       &lt;ServiceRequestInfo&gt;         &lt;RequestorRef           xmlns="http://www.siri.org.uk"           &gt;SIRITest&lt;/RequestorRef&gt;       &lt;/ServiceRequestInfo&gt;       &lt;Request         version="1.0"&gt;         &lt;PreviewInterval           xmlns="http://www.siri.org.uk"&gt;PID&lt;/Previe           wInterval&gt;         &lt;/Request&gt;         &lt;RequestExtension/&gt;       &lt;/oxy:GetEstimatedTimetable&gt;     &lt;/SOAP-ENV:Body&gt;   &lt;/SOAP-ENV:Envelope&gt; </pre> | <pre> &lt;?xml version="1.0" ?&gt; &lt;S:Envelope   xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"&gt;   &lt;S:Body&gt;     &lt;ns2:GetEstimatedTimetableResponse       xmlns:ns2="http://siri.jbv.no"       xmlns:ns3="http://www.siri.org.uk"&gt;       &lt;ServiceDeliveryInfo&gt;         &lt;ns3:ResponseTimestamp&gt;2009-02-         16T13:57:08+01:00&lt;/ns3:ResponseTimestamp&gt;         &lt;ns3:ProducerRef&gt;jbv&lt;/ns3:ProducerRef&gt;       &lt;/ServiceDeliveryInfo&gt;       &lt;Answer&gt;         &lt;ns3:EstimatedTimetableDelivery           version="1.0"&gt;           &lt;ns3:ResponseTimestamp&gt;2009-02-           16T13:57:08+01:00&lt;/ns3:ResponseTimestamp&gt;           &lt;ns3:Status&gt;&gt;false&lt;/ns3:Status&gt;           &lt;ns3:ErrorCondition&gt;             &lt;ns3:OtherError&gt;               &lt;ns3:ErrorText&gt;Consumer reached limit for response size. Limit your               request by filters or contact system administrator.&lt;/ns3:ErrorText&gt;             &lt;/ns3:OtherError&gt;           &lt;/ns3:ErrorCondition&gt;           &lt;ns3:EstimatedTimetableVersionFrame&gt;             &lt;ns3:RecordedAtTime&gt;2009-02-16T13:57:08+01:00&lt;/ns3:RecordedAtTime&gt;             &lt;ns3:EstimatedVehicleJourney&gt;               &lt;ns3:LineRef&gt;OR1-DE1&lt;/ns3:LineRef&gt;               &lt;ns3:DirectionRef&gt;DE1&lt;/ns3:DirectionRef&gt;               &lt;ns3:DatedVehicleJourneyRef&gt;SIRI5_2009-02-               16_19:00&lt;/ns3:DatedVehicleJourneyRef&gt;               &lt;ns3:Cancellation&gt;&gt;false&lt;/ns3:Cancellation&gt;               &lt;ns3:VehicleMode&gt;rail&lt;/ns3:VehicleMode&gt;               &lt;ns3:OperatorRef&gt;SIRICOM2&lt;/ns3:OperatorRef&gt;               &lt;ns3:ProductCategoryRef&gt;STYP&lt;/ns3:ProductCategoryRef&gt;               &lt;ns3:ServiceFeatureRef&gt;SKI&lt;/ns3:ServiceFeatureRef&gt;               &lt;ns3:Monitored&gt;&gt;true&lt;/ns3:Monitored&gt;               &lt;ns3:PredictionInaccurate&gt;&gt;false&lt;/ns3:PredictionInaccurate&gt;               &lt;ns3:VehicleRef&gt;SIRI5&lt;/ns3:VehicleRef&gt;             &lt;ns3:EstimatedCall&gt;               &lt;ns3:StopPointRef&gt;OR1&lt;/ns3:StopPointRef&gt;               &lt;ns3:VisitNumber&gt;1&lt;/ns3:VisitNumber&gt;               &lt;ns3:StopPointName&gt;SIRI Origin 1&lt;/ns3:StopPointName&gt;               &lt;ns3:Cancellation&gt;&gt;false&lt;/ns3:Cancellation&gt;               &lt;ns3:PredictionInaccurate&gt;&gt;false&lt;/ns3:PredictionInaccurate&gt;               &lt;ns3:RequestStop&gt;&gt;false&lt;/ns3:RequestStop&gt;               &lt;ns3:DestinationDisplay&gt;SIRI Destination 1&lt;/ns3:DestinationDisplay&gt;               &lt;ns3:CallNote&gt;Flytoget&lt;/ns3:CallNote&gt;               &lt;ns3:ArrivalBoardingActivity&gt;passThru&lt;/ns3:ArrivalBoardingActivity&gt;             &lt;/ns3:EstimatedCall&gt;           &lt;/ns3:EstimatedTimetableDelivery&gt;         &lt;/Answer&gt;       &lt;/ns2:GetEstimatedTimetableResponse&gt;     &lt;/S:Body&gt;   &lt;/S:Envelope&gt; </pre> |

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|  | <pre>                 &lt;ns3:AimedDepartureTime&gt;2009-02-                 16T19:00:00+01:00&lt;/ns3:AimedDepartureTime&gt;                 &lt;ns3:ExpectedDepartureTime                 &gt;2009-02-16T19:00:00+01:00&lt;/ns3:ExpectedDepartureTime&gt;                 &lt;ns3:DepartureStatus&gt;onTime&lt;/ns3:DepartureStatus&gt;                 &lt;ns3:DeparturePlatformName&gt;S0&lt;/ns3:DeparturePlatformName&gt;                 &lt;ns3:DepartureBoardingActivity&gt;boarding             &lt;/ns3:DepartureBoardingActivity&gt;                 &lt;ns3:Extensions&gt;                 &lt;ns3:CallMonitored&gt;true&lt;/ns3:CallMonitored&gt;                 &lt;ns3:DataSource&gt;CTRIGGER&lt;/ns3:DataSource&gt;                 &lt;ns3:TrainSwitches&gt;SIRI6_2009-02-15_00:00&lt;/ns3:TrainSwitches&gt;                 &lt;ns3:StopsAtAirport&gt;false&lt;/ns3:StopsAtAirport&gt;                 &lt;/ns3:Extensions&gt;             &lt;/ns3:EstimatedCall&gt;                 &lt;ns3:Extensions&gt;                 &lt;ns3:TrainKind&gt;SKI&lt;/ns3:TrainKind&gt;                 &lt;ns3:TrainType&gt;STYP&lt;/ns3:TrainType&gt;                 &lt;ns3:OriginCity&gt;                 &lt;ns3:CityCode&gt;OR1&lt;/ns3:CityCode&gt;                 &lt;ns3:CityName&gt;SIRI Origin 1&lt;/ns3:CityName&gt;                 &lt;/ns3:OriginCity&gt;                 &lt;/ns3:Extensions&gt;             &lt;/ns3:EstimatedVehicleJourney&gt;             &lt;/ns3:EstimatedTimetableVersionFrame&gt;             &lt;/ns3:EstimatedTimetableDelivery&gt;         &lt;/Answer&gt;         &lt;AnswerExtension/&gt;         &lt;/ns2:GetEstimatedTimetableResponse&gt;     &lt;/S:Body&gt; &lt;/S:Envelope&gt;             </pre> |
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#### 4.1.1 GetStopMonitoring

| XML request   | XML response  |
|---|---|
| <pre> &lt;SOAP-ENV:Envelope xmlns:SOAP- ENV="http://schemas.xmlsoap.org/soap/enve lope/"&gt;   &lt;SOAP-ENV:Header/&gt;   &lt;SOAP-ENV:Body&gt;     &lt;oxy:GetStopMonitoring xmlns:oxy="http://siri.jbv.no"&gt;       &lt;ServiceRequestInfo&gt;         &lt;RequestTimestamp xmlns="http://www.siri.org.uk/"&gt;2010-03- 23T17:39:17+01:00&lt;/RequestTimestamp&gt;         &lt;RequestorRef xmlns="http://www.siri.org.uk/"&gt;client&lt;/Req uestorRef&gt;       &lt;/ServiceRequestInfo&gt;       &lt;Request&gt;         &lt;RequestTimestamp xmlns="http://www.siri.org.uk/"&gt;2010-03- 23T17:39:17+01:00&lt;/RequestTimestamp&gt;         &lt;PreviewInterval xmlns="http://www.siri.org.uk/"&gt;PT1H&lt;/Pre viewInterval&gt;         &lt;StartTime xmlns="http://www.siri.org.uk/"&gt;2010-03- 23T07:30:00+01:00&lt;/StartTime&gt;         &lt;MonitoringRef xmlns="http://www.siri.org.uk/"&gt;OSL&lt;/Mon itoringRef&gt;         &lt;DestinationRef xmlns="http://www.siri.org.uk/"&gt;GAR&lt;/Des tinationRef&gt;         &lt;MaximumStopVisits xmlns="http://www.siri.org.uk/"&gt;3&lt;/Maximu mStopVisits&gt;       &lt;/Request&gt;       &lt;RequestExtension/&gt;     &lt;/oxy:GetStopMonitoring&gt;   &lt;/SOAP-ENV:Body&gt;             </pre> | <pre> &lt;?xml version="1.0" ?&gt; &lt;S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"&gt;   &lt;S:Body&gt;     &lt;ns2:GetStopMonitoringResponse xmlns:ns2="http://siri.jbv.no" xmlns:ns3="http://www.siri.org.uk/"&gt;       &lt;ServiceDeliveryInfo&gt;         &lt;ns3:ResponseTimestamp&gt;2010-03- 23T17:46:21+01:00&lt;/ns3:ResponseTimestamp&gt;         &lt;ns3:ProducerRef&gt;jbv&lt;/ns3:ProducerRef&gt;         &lt;ns3:Status&gt;true&lt;/ns3:Status&gt;       &lt;/ServiceDeliveryInfo&gt;       &lt;Answer&gt;         &lt;ns3:StopMonitoringDelivery version="1.0"&gt;           &lt;ns3:ResponseTimestamp&gt;2010-03- 23T17:46:21+01:00&lt;/ns3:ResponseTimestamp&gt;           &lt;ns3:MonitoredStopVisit&gt;             &lt;ns3:RecordedAtTime&gt;2010-03-23T17:46:21+01:00&lt;/ns3:RecordedAtTime&gt;             &lt;ns3:ItemIdentifier&gt;8564956&lt;/ns3:ItemIdentifier&gt;             &lt;ns3:MonitoringRef&gt;OSL&lt;/ns3:MonitoringRef&gt;             &lt;ns3:LineRef&gt;OSL-GAR&lt;/ns3:LineRef&gt;             &lt;ns3:DirectionRef&gt;GAR&lt;/ns3:DirectionRef&gt;             &lt;ns3:FramedVehicleJourneyRef&gt;               &lt;ns3:DataFrameRef&gt;2010-03-23&lt;/ns3:DataFrameRef&gt;               &lt;ns3:DatedVehicleJourneyRef&gt;3515_2010-03- 23_07:35&lt;/ns3:DatedVehicleJourneyRef&gt;             &lt;/ns3:FramedVehicleJourneyRef&gt;             &lt;ns3:PublishedLineName&gt;Oslo Airport&lt;/ns3:PublishedLineName&gt;             &lt;ns3:OperatorRef&gt;FLY&lt;/ns3:OperatorRef&gt;             &lt;ns3:ProductCategoryRef&gt;GMB&lt;/ns3:ProductCategoryRef&gt;             &lt;ns3:ServiceFeatureRef&gt;Pt&lt;/ns3:ServiceFeatureRef&gt;             &lt;ns3:OriginRef&gt;OSL&lt;/ns3:OriginRef&gt;             &lt;ns3:OriginName&gt;Oslo S&lt;/ns3:OriginName&gt;             &lt;ns3:DestinationName&gt;Oslo Airport&lt;/ns3:DestinationName&gt;             &lt;ns3:Monitored&gt;true&lt;/ns3:Monitored&gt;             &lt;ns3:DataSource&gt;ROLLONOFF&lt;/ns3:DataSource&gt;             &lt;ns3:Delay&gt;P0Y0M0DT0H0M0S&lt;/ns3:Delay&gt;             &lt;ns3:VehicleRef&gt;3515&lt;/ns3:VehicleRef&gt;             &lt;ns3:StopPointRef&gt;OSL&lt;/ns3:StopPointRef&gt;           &lt;/ns3:MonitoredStopVisit&gt;         &lt;/ns3:StopMonitoringDelivery&gt;       &lt;/Answer&gt;     &lt;/ns2:GetStopMonitoringResponse&gt;   &lt;/S:Body&gt;             </pre> |

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| </SOAP-ENV:Envelope> | <pre>                 &lt;ns3:VisitNumber&gt;1&lt;/ns3:VisitNumber&gt;                 &lt;ns3:StopPointName&gt;Oslo S&lt;/ns3:StopPointName&gt;                 &lt;ns3:VehicleAtStop&gt;&gt;false&lt;/ns3:VehicleAtStop&gt;                 &lt;ns3:RequestStop&gt;&gt;false&lt;/ns3:RequestStop&gt;                 &lt;ns3:DestinationDisplay&gt;Oslo Airport&lt;/ns3:DestinationDisplay&gt;                 &lt;ns3:AimedArrivalTime&gt;2010-03-                 23T07:35:00+01:00&lt;/ns3:AimedArrivalTime&gt;                 &lt;ns3:ExpectedArrivalTime&gt;2010-03-                 23T07:35:00+01:00&lt;/ns3:ExpectedArrivalTime&gt;                 &lt;ns3:ArrivalStatus&gt;onTime&lt;/ns3:ArrivalStatus&gt;                 &lt;ns3:ArrivalPlatformName&gt;14&lt;/ns3:ArrivalPlatformName&gt;                 &lt;ns3:ArrivalBoardingActivity&gt;noAlighting&lt;/ns3:ArrivalBoardingActivity&gt;                 &lt;ns3:AimedDepartureTime&gt;2010-03-                 23T07:35:00+01:00&lt;/ns3:AimedDepartureTime&gt;                 &lt;ns3:ExpectedDepartureTime&gt;2010-03-                 23T07:35:00+01:00&lt;/ns3:ExpectedDepartureTime&gt;                 &lt;ns3:DepartureStatus&gt;onTime&lt;/ns3:DepartureStatus&gt;                 &lt;ns3:DeparturePlatformName&gt;14&lt;/ns3:DeparturePlatformName&gt;                 &lt;ns3:DepartureBoardingActivity&gt;boarding&lt;/ns3:DepartureBoardingActivity&gt;                 &lt;ns3:NextStopPointName&gt;Hellerud&lt;/ns3:NextStopPointName&gt;                 &lt;ns3:StopVisitNote&gt;Flytoget – Direkte til Oslo                 Lufthavn&lt;/ns3:StopVisitNote&gt;                 &lt;ns3:Extensions&gt;                 &lt;ns3:TrainKind&gt;Pt&lt;/ns3:TrainKind&gt;                 &lt;ns3:TrainType&gt;GMB&lt;/ns3:TrainType&gt;                 &lt;ns3:StopsAtAirport&gt;&gt;true&lt;/ns3:StopsAtAirport&gt;                 &lt;/ns3:Extensions&gt;                 &lt;/ns3:MonitoredStop Visit&gt;                 &lt;ns3:MonitoredStop Visit&gt;                 &lt;ns3:RecordedAtTime&gt;2010-03-23T17:46:21+01:00&lt;/ns3:RecordedAtTime&gt;                 &lt;ns3:ItemIdentifier&gt;8570953&lt;/ns3:ItemIdentifier&gt;                 &lt;ns3:MonitoringRef&gt;OSL&lt;/ns3:MonitoringRef&gt;                 &lt;ns3:LineRef&gt;DRM-GAR&lt;/ns3:LineRef&gt;                 &lt;ns3:DirectionRef&gt;GAR&lt;/ns3:DirectionRef&gt;                 &lt;ns3:FramedVehicleJourneyRef&gt;                 &lt;ns3:DataFrameRef&gt;2010-03-23&lt;/ns3:DataFrameRef&gt;                 &lt;ns3:DatedVehicleJourneyRef&gt;3719_2010-03-                 23_07:06&lt;/ns3:DatedVehicleJourneyRef&gt;                 &lt;/ns3:FramedVehicleJourneyRef&gt;                 &lt;ns3:PublishedLineName&gt;Oslo Airport&lt;/ns3:PublishedLineName&gt;                 &lt;ns3:OperatorRef&gt;FLY&lt;/ns3:OperatorRef&gt;                 &lt;ns3:ProductCategoryRef&gt;GMB&lt;/ns3:ProductCategoryRef&gt;                 &lt;ns3:ServiceFeatureRef&gt;Pt&lt;/ns3:ServiceFeatureRef&gt;                 &lt;ns3:OriginRef&gt;DRM&lt;/ns3:OriginRef&gt;                 &lt;ns3:OriginName&gt;Drammen&lt;/ns3:OriginName&gt;                 &lt;ns3:DestinationName&gt;Oslo Airport&lt;/ns3:DestinationName&gt;                 &lt;ns3:Monitored&gt;true&lt;/ns3:Monitored&gt;                 &lt;ns3:DataSource&gt;CTRIGGER&lt;/ns3:DataSource&gt;                 &lt;ns3:Delay&gt;P0Y0M0DT0H0M0S&lt;/ns3:Delay&gt;                 &lt;ns3:VehicleRef&gt;3719&lt;/ns3:VehicleRef&gt;                 &lt;ns3:StopPointRef&gt;OSL&lt;/ns3:StopPointRef&gt;                 &lt;ns3:VisitNumber&gt;1&lt;/ns3:VisitNumber&gt;                 &lt;ns3:StopPointName&gt;Oslo S&lt;/ns3:StopPointName&gt;                 &lt;ns3:VehicleAtStop&gt;&gt;false&lt;/ns3:VehicleAtStop&gt;                 &lt;ns3:RequestStop&gt;&gt;false&lt;/ns3:RequestStop&gt;                 &lt;ns3:DestinationDisplay&gt;Oslo Airport&lt;/ns3:DestinationDisplay&gt;                 &lt;ns3:AimedArrivalTime&gt;2010-03-                 23T07:42:00+01:00&lt;/ns3:AimedArrivalTime&gt;                 &lt;ns3:ExpectedArrivalTime&gt;2010-03-                 23T07:42:00+01:00&lt;/ns3:ExpectedArrivalTime&gt;                 &lt;ns3:ArrivalStatus&gt;onTime&lt;/ns3:ArrivalStatus&gt;                 &lt;ns3:ArrivalPlatformName&gt;13&lt;/ns3:ArrivalPlatformName&gt;                 &lt;ns3:ArrivalBoardingActivity&gt;noAlighting&lt;/ns3:ArrivalBoardingActivity&gt;                 &lt;ns3:AimedDepartureTime&gt;2010-03-                 23T07:45:00+01:00&lt;/ns3:AimedDepartureTime&gt;                 &lt;ns3:ExpectedDepartureTime&gt;2010-03-                 23T07:45:00+01:00&lt;/ns3:ExpectedDepartureTime&gt;                 &lt;ns3:DepartureStatus&gt;onTime&lt;/ns3:DepartureStatus&gt;                 &lt;ns3:DeparturePlatformName&gt;13&lt;/ns3:DeparturePlatformName&gt;                 &lt;ns3:DepartureBoardingActivity&gt;boarding&lt;/ns3:DepartureBoardingActivity&gt;                 &lt;ns3:NextStopPointName&gt;Hellerud&lt;/ns3:NextStopPointName&gt;                 &lt;ns3:StopVisitNote&gt;Flytoget – Direkte til Oslo                 Lufthavn&lt;/ns3:StopVisitNote&gt;                 &lt;ns3:Extensions&gt;             </pre> |
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|  | <pre>                 &lt;ns3:TrainKind&gt;Pt&lt;/ns3:TrainKind&gt;                 &lt;ns3:TrainType&gt;GMB&lt;/ns3:TrainType&gt;                 &lt;ns3:StopsAtAirport&gt;true&lt;/ns3:StopsAtAirport&gt;             &lt;/ns3:Extensions&gt;             &lt;/ns3:MonitoredStop Visit&gt;             &lt;ns3:MonitoredStop Visit&gt;                 &lt;ns3:RecordedAtTime&gt;2010-03-23T17:46:21+01:00&lt;/ns3:RecordedAtTime&gt;                 &lt;ns3:ItemIdentifier&gt;8564999&lt;/ns3:ItemIdentifier&gt;                 &lt;ns3:MonitoringRef&gt;OSL&lt;/ns3:MonitoringRef&gt;                 &lt;ns3:LineRef&gt;OSL-GAR&lt;/ns3:LineRef&gt;                 &lt;ns3:DirectionRef&gt;GAR&lt;/ns3:DirectionRef&gt;                 &lt;ns3:FramedVehicleJourneyRef&gt;                     &lt;ns3:DataFrameRef&gt;2010-03-23&lt;/ns3:DataFrameRef&gt;                     &lt;ns3:DatedVehicleJourneyRef&gt;3517_2010-03- 23_07:55&lt;/ns3:DatedVehicleJourneyRef&gt;                 &lt;/ns3:FramedVehicleJourneyRef&gt;                 &lt;ns3:PublishedLineName&gt;Oslo Airport&lt;/ns3:PublishedLineName&gt;                 &lt;ns3:OperatorRef&gt;FLY&lt;/ns3:OperatorRef&gt;                 &lt;ns3:ProductCategoryRef&gt;GMB&lt;/ns3:ProductCategoryRef&gt;                 &lt;ns3:ServiceFeatureRef&gt;Pt&lt;/ns3:ServiceFeatureRef&gt;                 &lt;ns3:OriginRef&gt;OSL&lt;/ns3:OriginRef&gt;                 &lt;ns3:OriginName&gt;Oslo S&lt;/ns3:OriginName&gt;                 &lt;ns3:DestinationName&gt;Oslo Airport&lt;/ns3:DestinationName&gt;                 &lt;ns3:Monitored&gt;true&lt;/ns3:Monitored&gt;                 &lt;ns3:DataSource&gt;VICOS_SV&lt;/ns3:DataSource&gt;                 &lt;ns3:Delay&gt;P0Y0M0DT0H0M0S&lt;/ns3:Delay&gt;                 &lt;ns3:VehicleRef&gt;3517&lt;/ns3:VehicleRef&gt;                 &lt;ns3:StopPointRef&gt;OSL&lt;/ns3:StopPointRef&gt;                 &lt;ns3:VisitNumber&gt;1&lt;/ns3:VisitNumber&gt;                 &lt;ns3:StopPointName&gt;Oslo S&lt;/ns3:StopPointName&gt;                 &lt;ns3:VehicleAtStop&gt;&gt;false&lt;/ns3:VehicleAtStop&gt;                 &lt;ns3:RequestStop&gt;&gt;false&lt;/ns3:RequestStop&gt;                 &lt;ns3:DestinationDisplay&gt;Oslo Airport&lt;/ns3:DestinationDisplay&gt;                 &lt;ns3:AimedArrivalTime&gt;2010-03- 23T07:55:00+01:00&lt;/ns3:AimedArrivalTime&gt;                 &lt;ns3:ExpectedArrivalTime&gt;2010-03- 23T07:55:00+01:00&lt;/ns3:ExpectedArrivalTime&gt;                 &lt;ns3:ArrivalStatus&gt;onTime&lt;/ns3:ArrivalStatus&gt;                 &lt;ns3:ArrivalPlatformName&gt;14&lt;/ns3:ArrivalPlatformName&gt;                 &lt;ns3:ArrivalBoardingActivity&gt;noAlighting&lt;/ns3:ArrivalBoardingActivity&gt;                 &lt;ns3:AimedDepartureTime&gt;2010-03- 23T07:55:00+01:00&lt;/ns3:AimedDepartureTime&gt;                 &lt;ns3:ExpectedDepartureTime&gt;2010-03- 23T07:55:00+01:00&lt;/ns3:ExpectedDepartureTime&gt;                 &lt;ns3:DepartureStatus&gt;onTime&lt;/ns3:DepartureStatus&gt;                 &lt;ns3:DeparturePlatformName&gt;14&lt;/ns3:DeparturePlatformName&gt;                 &lt;ns3:DepartureBoardingActivity&gt;boarding&lt;/ns3:DepartureBoardingActivity&gt;                 &lt;ns3:NextStopPointName&gt;Hellerud&lt;/ns3:NextStopPointName&gt;                 &lt;ns3:StopVisitNote&gt;Flytoget – Direkte til Oslo Lufthavn&lt;/ns3:StopVisitNote&gt;             &lt;ns3:Extensions&gt;                 &lt;ns3:TrainKind&gt;Pt&lt;/ns3:TrainKind&gt;                 &lt;ns3:TrainType&gt;GMB&lt;/ns3:TrainType&gt;                 &lt;ns3:TrainBecomes&gt;2755_2010-03-23_10:24&lt;/ns3:TrainBecomes&gt;                 &lt;ns3:StopsAtAirport&gt;true&lt;/ns3:StopsAtAirport&gt;             &lt;/ns3:Extensions&gt;             &lt;/ns3:MonitoredStop Visit&gt;             &lt;/ns3:StopMonitoringDelivery&gt;         &lt;/Answer&gt;         &lt;AnswerExtension/&gt;     &lt;/ns2:GetStopMonitoringResponse&gt; &lt;/S:Body&gt; &lt;/S:Envelope&gt;             </pre> |
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#### 4.1.1 GetVehicleMonitoring

| XML request   | XML response   |
|---|--|
| <pre> &lt;SOAP-ENV:Envelope xmlns:SOAP- ENV="http://schemas.xmlsoap.org/soap/enve lope/"&gt;   &lt;SOAP-ENV:Header/&gt;   &lt;SOAP-ENV:Body&gt;     &lt;oxy:GetVehicleMonitoring             </pre> | <pre> &lt;?xml version="1.0" ?&gt; &lt;S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"&gt;   &lt;S:Body&gt;     &lt;ns2:GetVehicleMonitoringResponse xmlns:ns2="http://siri.jbv.no" xmlns:ns3="http://www.siri.org.uk"&gt;       &lt;ServiceDeliveryInfo&gt;             </pre> |

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|---|--|
| <pre> xmlns:oxy="http://siri.jbv.no"&gt;   &lt;ServiceRequestInfo&gt;     &lt;RequestTimestamp xmlns="http://www.siri.org.uk/"&gt;2010-02- 19T11:07:00&lt;/RequestTimestamp&gt;     &lt;RequestorRef xmlns="http://www.siri.org.uk/"&gt;client&lt;/Req uestorRef&gt;     &lt;/ServiceRequestInfo&gt;   &lt;/Request&gt;   &lt;RequestTimestamp xmlns="http://www.siri.org.uk/"&gt;2010-02- 19T11:07:00&lt;/RequestTimestamp&gt;   &lt;VehicleMonitoringRef xmlns="http://www.siri.org.uk/"&gt;127_2010- 03-23_18:00&lt;/VehicleMonitoringRef&gt;   &lt;/Request&gt;   &lt;RequestExtension&gt;   &lt;/oxy:GetVehicleMonitoring&gt; &lt;/SOAP-ENV:Body&gt; &lt;/SOAP-ENV:Envelope&gt;         </pre> | <pre> &lt;ns3:ResponseTimestamp&gt;2010-03- 23T17:49:19+01:00&lt;/ns3:ResponseTimestamp&gt;   &lt;ns3:ProducerRef&gt;jbv&lt;/ns3:ProducerRef&gt;   &lt;ns3&gt;Status&gt;true&lt;/ns3&gt;Status&gt; &lt;/ServiceDeliveryInfo&gt; &lt;Answer&gt;   &lt;ns3:VehicleMonitoringDelivery version="1.0"&gt;     &lt;ns3:ResponseTimestamp&gt;2010-03- 23T17:49:19+01:00&lt;/ns3:ResponseTimestamp&gt;     &lt;ns3:VehicleActivity&gt;       &lt;ns3:RecordedAtTime&gt;2010-03-23T17:49:19+01:00&lt;/ns3:RecordedAtTime&gt;       &lt;ns3:ItemIdentifier&gt;8626201&lt;/ns3:ItemIdentifier&gt;       &lt;ns3:ValidUntilTime&gt;2010-03-23T17:49:19+01:00&lt;/ns3:ValidUntilTime&gt;       &lt;ns3:VehicleMonitoringRef&gt;127_2010-03- 23_18:00&lt;/ns3:VehicleMonitoringRef&gt;       &lt;ns3:MonitoredVehicleJourney&gt;         &lt;ns3:LineRef&gt;OSL-GTB&lt;/ns3:LineRef&gt;         &lt;ns3:DirectionRef&gt;GTB&lt;/ns3:DirectionRef&gt;         &lt;ns3:FramedVehicleJourneyRef&gt;           &lt;ns3:DataFrameRef&gt;2010-03-23&lt;/ns3:DataFrameRef&gt;           &lt;ns3:DatedVehicleJourneyRef&gt;127_2010-03- 23_18:00&lt;/ns3:DatedVehicleJourneyRef&gt;           &lt;/ns3:FramedVehicleJourneyRef&gt;           &lt;ns3:PublishedLineName&gt;Gøteborg&lt;/ns3:PublishedLineName&gt;           &lt;ns3:OperatorRef&gt;NSB&lt;/ns3:OperatorRef&gt;           &lt;ns3:ProductCategoryRef&gt;IC&lt;/ns3:ProductCategoryRef&gt;           &lt;ns3:ServiceFeatureRef&gt;Pt&lt;/ns3:ServiceFeatureRef&gt;           &lt;ns3:OriginRef&gt;OSL&lt;/ns3:OriginRef&gt;           &lt;ns3:OriginName&gt;Oslo S&lt;/ns3:OriginName&gt;           &lt;ns3:DestinationRef&gt;GTB&lt;/ns3:DestinationRef&gt;           &lt;ns3:DestinationName&gt;Gøteborg&lt;/ns3:DestinationName&gt;           &lt;ns3:DestinationShortName&gt;GTB&lt;/ns3:DestinationShortName&gt;           &lt;ns3:Monitored&gt;true&lt;/ns3:Monitored&gt;           &lt;ns3:PredictionInaccurate&gt;true&lt;/ns3:PredictionInaccurate&gt;           &lt;ns3:VehicleLocation&gt;             &lt;ns3:Longitude&gt;11.09698&lt;/ns3:Longitude&gt;             &lt;ns3:Latitude&gt;60.1927&lt;/ns3:Latitude&gt;           &lt;/ns3:VehicleLocation&gt;           &lt;ns3:DataSource&gt;ROLLONOFF&lt;/ns3:DataSource&gt;           &lt;ns3:VehicleRef&gt;127&lt;/ns3:VehicleRef&gt;           &lt;ns3:MonitoredCall&gt;             &lt;ns3:StopPointRef&gt;OSL&lt;/ns3:StopPointRef&gt;             &lt;ns3:VisitNumber&gt;1&lt;/ns3:VisitNumber&gt;             &lt;ns3:StopPointName&gt;Oslo S&lt;/ns3:StopPointName&gt;             &lt;ns3:VehicleAtStop&gt;&gt;false&lt;/ns3:VehicleAtStop&gt;             &lt;ns3:RequestStop&gt;&gt;false&lt;/ns3:RequestStop&gt;             &lt;ns3:DestinationDisplay&gt;Gøteborg&lt;/ns3:DestinationDisplay&gt;             &lt;ns3:CallNote&gt;NSB Regiontog – Stopper ved Moss, Rygge, Råde, Fredrikstad og Sarpsborg før Halden&lt;/ns3:CallNote&gt;             &lt;ns3:AimedArrivalTime&gt;2010-03- 23T18:00:00+01:00&lt;/ns3:AimedArrivalTime&gt;             &lt;ns3:ExpectedArrivalTime&gt;2010-03- 23T18:00:00+01:00&lt;/ns3:ExpectedArrivalTime&gt;             &lt;ns3:ArrivalStatus&gt;onTime&lt;/ns3:ArrivalStatus&gt;             &lt;ns3:ArrivalPlatformName&gt;18&lt;/ns3:ArrivalPlatformName&gt;             &lt;ns3:ArrivalBoardingActivity&gt;noAlighting           &lt;/ns3:ArrivalBoardingActivity&gt;           &lt;ns3:AimedDepartureTime&gt;2010-03- 23T18:00:00+01:00&lt;/ns3:AimedDepartureTime&gt;           &lt;ns3:ExpectedDepartureTime&gt;2010-03- 23T18:00:00+01:00&lt;/ns3:ExpectedDepartureTime&gt;           &lt;ns3:DepartureStatus&gt;onTime&lt;/ns3:DepartureStatus&gt;           &lt;ns3:DeparturePlatformName&gt;18&lt;/ns3:DeparturePlatformName&gt;           &lt;ns3:DepartureBoardingActivity&gt;boarding         &lt;/ns3:DepartureBoardingActivity&gt;           &lt;ns3:Extensions&gt;             &lt;ns3:CallMonitored&gt;true&lt;/ns3:CallMonitored&gt;             &lt;ns3:StopsAtAirport&gt;&gt;false&lt;/ns3:StopsAtAirport&gt;           &lt;/ns3:Extensions&gt;         &lt;/ns3:MonitoredCall&gt;         &lt;ns3:OnwardCalls&gt;           &lt;ns3:OnwardCall&gt;             &lt;ns3:StopPointRef&gt;SKI&lt;/ns3:StopPointRef&gt;             &lt;ns3:VisitNumber&gt;1&lt;/ns3:VisitNumber&gt;           &lt;/ns3:OnwardCall&gt;         &lt;/ns3:OnwardCalls&gt;       &lt;/ns3:MonitoredVehicleJourney&gt;     &lt;/ns3:VehicleActivity&gt;   &lt;/ns3:VehicleMonitoringDelivery&gt; &lt;/Answer&gt; </pre> |
|---|--|



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|  | <pre>                 &lt;ns3:StopPointName&gt;Ski&lt;/ns3:StopPointName&gt;                 &lt;ns3:VehicleAtStop&gt;&gt;false&lt;/ns3:VehicleAtStop&gt;                 &lt;ns3:AimedArrivalTime&gt;2010-03- 23T18:21:00+01:00&lt;/ns3:AimedArrivalTime&gt;                 &lt;ns3:ExpectedArrivalTime&gt;2010-03- 23T18:21:00+01:00&lt;/ns3:ExpectedArrivalTime&gt;                 &lt;ns3:ArrivalStatus&gt;onTime&lt;/ns3:ArrivalStatus&gt;                 &lt;ns3:ArrivalBoardingActivity&gt;noAlighting &lt;/ns3:ArrivalBoardingActivity&gt;                 &lt;ns3:AimedDepartureTime&gt;2010-03- 23T18:22:00+01:00&lt;/ns3:AimedDepartureTime&gt;                 &lt;ns3:ExpectedDepartureTime&gt;2010-03- 23T18:22:00+01:00&lt;/ns3:ExpectedDepartureTime&gt;                 &lt;ns3:DepartureStatus&gt;onTime&lt;/ns3:DepartureStatus&gt;                 &lt;ns3:DepartureBoardingActivity&gt;boarding &lt;/ns3:DepartureBoardingActivity&gt;                  &lt;/ns3:OnwardCall&gt;                 &lt;ns3:OnwardCall&gt;                 &lt;ns3:StopPointRef&gt;MOS&lt;/ns3:StopPointRef&gt;                 &lt;ns3:VisitNumber&gt;1&lt;/ns3:VisitNumber&gt;                 &lt;ns3:StopPointName&gt;Moss&lt;/ns3:StopPointName&gt;                 &lt;ns3:VehicleAtStop&gt;&gt;false&lt;/ns3:VehicleAtStop&gt;                 &lt;ns3:AimedArrivalTime&gt;2010-03- 23T18:41:00+01:00&lt;/ns3:AimedArrivalTime&gt;                 &lt;ns3:ExpectedArrivalTime&gt;2010-03- 23T18:41:00+01:00&lt;/ns3:ExpectedArrivalTime&gt;                 &lt;ns3:ArrivalStatus&gt;onTime&lt;/ns3:ArrivalStatus&gt;                 &lt;ns3:ArrivalBoardingActivity&gt;noAlighting &lt;/ns3:ArrivalBoardingActivity&gt;                 &lt;ns3:AimedDepartureTime&gt;2010-03- 23T18:43:00+01:00&lt;/ns3:AimedDepartureTime&gt;                 &lt;ns3:ExpectedDepartureTime&gt;2010-03- 23T18:43:00+01:00&lt;/ns3:ExpectedDepartureTime&gt;                 &lt;ns3:DepartureStatus&gt;onTime&lt;/ns3:DepartureStatus&gt;                 &lt;ns3:DepartureBoardingActivity&gt;boarding &lt;/ns3:DepartureBoardingActivity&gt;                  &lt;/ns3:OnwardCall&gt;                 &lt;ns3:OnwardCall&gt;                 &lt;ns3:StopPointRef&gt;RYG&lt;/ns3:StopPointRef&gt;                 &lt;ns3:VisitNumber&gt;1&lt;/ns3:VisitNumber&gt;                 &lt;ns3:StopPointName&gt;Rygge&lt;/ns3:StopPointName&gt;                 &lt;ns3:VehicleAtStop&gt;&gt;false&lt;/ns3:VehicleAtStop&gt;                 &lt;ns3:AimedArrivalTime&gt;2010-03- 23T18:50:00+01:00&lt;/ns3:AimedArrivalTime&gt;                 &lt;ns3:ExpectedArrivalTime&gt;2010-03- 23T18:50:00+01:00&lt;/ns3:ExpectedArrivalTime&gt;                 &lt;ns3:ArrivalStatus&gt;onTime&lt;/ns3:ArrivalStatus&gt;                 &lt;ns3:ArrivalBoardingActivity&gt;noAlighting &lt;/ns3:ArrivalBoardingActivity&gt;                 &lt;ns3:AimedDepartureTime&gt;2010-03- 23T18:50:00+01:00&lt;/ns3:AimedDepartureTime&gt;                 &lt;ns3:ExpectedDepartureTime&gt;2010-03- 23T18:50:00+01:00&lt;/ns3:ExpectedDepartureTime&gt;                 &lt;ns3:DepartureStatus&gt;onTime&lt;/ns3:DepartureStatus&gt;                 &lt;ns3:DepartureBoardingActivity&gt;boarding &lt;/ns3:DepartureBoardingActivity&gt;                  &lt;/ns3:OnwardCall&gt;                 &lt;ns3:OnwardCall&gt;                 &lt;ns3:StopPointRef&gt;RÅD&lt;/ns3:StopPointRef&gt;                 &lt;ns3:VisitNumber&gt;1&lt;/ns3:VisitNumber&gt;                 &lt;ns3:StopPointName&gt;Råde&lt;/ns3:StopPointName&gt;                 &lt;ns3:VehicleAtStop&gt;&gt;false&lt;/ns3:VehicleAtStop&gt;                 &lt;ns3:AimedArrivalTime&gt;2010-03- 23T18:56:00+01:00&lt;/ns3:AimedArrivalTime&gt;                 &lt;ns3:ExpectedArrivalTime&gt;2010-03- 23T18:56:00+01:00&lt;/ns3:ExpectedArrivalTime&gt;                 &lt;ns3:ArrivalStatus&gt;onTime&lt;/ns3:ArrivalStatus&gt;                 &lt;ns3:ArrivalBoardingActivity&gt;noAlighting &lt;/ns3:ArrivalBoardingActivity&gt;                 &lt;ns3:AimedDepartureTime&gt;2010-03- 23T18:56:00+01:00&lt;/ns3:AimedDepartureTime&gt;                 &lt;ns3:ExpectedDepartureTime&gt;2010-03- 23T18:56:00+01:00&lt;/ns3:ExpectedDepartureTime&gt;             </pre> |
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|  | <pre>                 &lt;ns3:DepartureStatus&gt;onTime&lt;/ns3:DepartureStatus&gt;                 &lt;ns3:DepartureBoardingActivity&gt;boarding &lt;/ns3:DepartureBoardingActivity&gt;                 &lt;/ns3:OnwardCall&gt;                 &lt;ns3:OnwardCall&gt;                 &lt;ns3:StopPointRef&gt;FRE&lt;/ns3:StopPointRef&gt;                 &lt;ns3:VisitNumber&gt;1&lt;/ns3:VisitNumber&gt;                 &lt;ns3:StopPointName&gt;Fredrikstad&lt;/ns3:StopPointName&gt;                 &lt;ns3:VehicleAtStop&gt;&gt;false&lt;/ns3:VehicleAtStop&gt;                 &lt;ns3:AimedArrivalTime&gt;2010-03- 23T19:07:00+01:00&lt;/ns3:AimedArrivalTime&gt;                 &lt;ns3:ExpectedArrivalTime&gt;2010-03- 23T19:07:00+01:00&lt;/ns3:ExpectedArrivalTime&gt;                 &lt;ns3:ArrivalStatus&gt;onTime&lt;/ns3:ArrivalStatus&gt;                 &lt;ns3:ArrivalBoardingActivity&gt;noAlighting &lt;/ns3:ArrivalBoardingActivity&gt;                 &lt;ns3:AimedDepartureTime&gt;2010-03- 23T19:09:00+01:00&lt;/ns3:AimedDepartureTime&gt;                 &lt;ns3:ExpectedDepartureTime&gt;2010-03- 23T19:09:00+01:00&lt;/ns3:ExpectedDepartureTime&gt;                 &lt;ns3:DepartureStatus&gt;onTime&lt;/ns3:DepartureStatus&gt;                 &lt;ns3:DepartureBoardingActivity&gt;boarding &lt;/ns3:DepartureBoardingActivity&gt;                 &lt;/ns3:OnwardCall&gt;                 &lt;ns3:OnwardCall&gt;                 &lt;ns3:StopPointRef&gt;SBO&lt;/ns3:StopPointRef&gt;                 &lt;ns3:VisitNumber&gt;1&lt;/ns3:VisitNumber&gt;                 &lt;ns3:StopPointName&gt;Sarpsborg&lt;/ns3:StopPointName&gt;                 &lt;ns3:VehicleAtStop&gt;&gt;false&lt;/ns3:VehicleAtStop&gt;                 &lt;ns3:AimedArrivalTime&gt;2010-03- 23T19:22:00+01:00&lt;/ns3:AimedArrivalTime&gt;                 &lt;ns3:ExpectedArrivalTime&gt;2010-03- 23T19:22:00+01:00&lt;/ns3:ExpectedArrivalTime&gt;                 &lt;ns3:ArrivalStatus&gt;onTime&lt;/ns3:ArrivalStatus&gt;                 &lt;ns3:ArrivalBoardingActivity&gt;noAlighting &lt;/ns3:ArrivalBoardingActivity&gt;                 &lt;ns3:AimedDepartureTime&gt;2010-03- 23T19:24:00+01:00&lt;/ns3:AimedDepartureTime&gt;                 &lt;ns3:ExpectedDepartureTime&gt;2010-03- 23T19:24:00+01:00&lt;/ns3:ExpectedDepartureTime&gt;                 &lt;ns3:DepartureStatus&gt;onTime&lt;/ns3:DepartureStatus&gt;                 &lt;ns3:DepartureBoardingActivity&gt;boarding &lt;/ns3:DepartureBoardingActivity&gt;                 &lt;/ns3:OnwardCall&gt;                 &lt;ns3:OnwardCall&gt;                 &lt;ns3:StopPointRef&gt;HLD&lt;/ns3:StopPointRef&gt;                 &lt;ns3:VisitNumber&gt;1&lt;/ns3:VisitNumber&gt;                 &lt;ns3:StopPointName&gt;Halden&lt;/ns3:StopPointName&gt;                 &lt;ns3:VehicleAtStop&gt;&gt;false&lt;/ns3:VehicleAtStop&gt;                 &lt;ns3:AimedArrivalTime&gt;2010-03- 23T19:44:00+01:00&lt;/ns3:AimedArrivalTime&gt;                 &lt;ns3:ExpectedArrivalTime&gt;2010-03- 23T19:44:00+01:00&lt;/ns3:ExpectedArrivalTime&gt;                 &lt;ns3:ArrivalStatus&gt;onTime&lt;/ns3:ArrivalStatus&gt;                 &lt;ns3:ArrivalBoardingActivity&gt;noAlighting &lt;/ns3:ArrivalBoardingActivity&gt;                 &lt;ns3:DepartureBoardingActivity&gt;boarding &lt;/ns3:DepartureBoardingActivity&gt;                 &lt;/ns3:OnwardCall&gt;                 &lt;/ns3:OnwardCalls&gt;                 &lt;/ns3:MonitoredVehicleJourney&gt;                 &lt;ns3:Extensions&gt;                 &lt;ns3:TrainKind&gt;Pt&lt;/ns3:TrainKind&gt;                 &lt;ns3:TrainType&gt;IC&lt;/ns3:TrainType&gt;                 &lt;/ns3:Extensions&gt;                 &lt;/ns3:VehicleActivity&gt;                 &lt;/ns3:VehicleMonitoringDelivery&gt;                 &lt;/Answer&gt;                 &lt;AnswerExtension/&gt;                 &lt;/ns2:GetVehicleMonitoringResponse&gt;                 &lt;/S:Body&gt;                 &lt;/S:Envelope&gt;             </pre> |
|--|--|



### 4.1.2 Subscribe

| XML request   | XML response  |
|---|---|
| <pre> &lt;SOAP-ENV:Envelope   xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"   &lt;SOAP-ENV:Header/&gt;   &lt;SOAP-ENV:Body&gt;     &lt;oxy:Subscribe       xmlns:oxy="http://siri.jbv.no"&gt;       &lt;SubscriptionRequestInfo&gt;         &lt;RequestorRef           xmlns="http://www.siri.org.uk"&gt;SIRITest&lt;/RequestorRef&gt;         &lt;/SubscriptionRequestInfo&gt;         &lt;Request&gt;           &lt;EstimatedTimetableSubscriptionRequest             xmlns="http://www.siri.org.uk"&gt;             &lt;SubscriptionIdentifier&gt;ID8&lt;/SubscriptionIdentifier&gt;             &lt;InitialTerminationTime&gt;2051-02- 16T16:13:02&lt;/InitialTerminationTime&gt;             &lt;EstimatedTimetableRequest               version="1.0"&gt;               &lt;PreviewInterval&gt;PT23H&lt;/PreviewInterval&gt;               &lt;OperatorRef                 xmlns="http://www.siri.org.uk"&gt;SIRICOMP&lt;/OperatorRef&gt;               &lt;Extensions                 xmlns="http://www.siri.org.uk"&gt;                 &lt;AreaRef                   xmlns="http://www.siri.org.uk"&gt;SIRIT&lt;/AreaRef&gt;                 &lt;/Extensions&gt;               &lt;/EstimatedTimetableRequest&gt;               &lt;ChangeBeforeUpdates&gt;PT3M&lt;/ChangeBeforeUpdates&gt;             &lt;/EstimatedTimetableSubscriptionRequest&gt;           &lt;/Request&gt;           &lt;RequestExtension/&gt;         &lt;/oxy:Subscribe&gt;       &lt;/SOAP-ENV:Body&gt;     &lt;/SOAP-ENV:Envelope&gt;           </pre> | <pre> &lt;?xml version="1.0" ?&gt; &lt;S:Envelope   xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"&gt;   &lt;S:Body&gt;     &lt;ns2:SubscribeResponse       xmlns:ns2="http://siri.jbv.no"       xmlns:ns3="http://www.siri.org.uk"&gt;       &lt;SubscriptionAnswerInfo&gt;         &lt;ns3:ResponseTimestamp&gt;2009-02- 16T17:02:00+01:00&lt;/ns3:ResponseTimestamp&gt;         &lt;ns3:ResponderRef&gt;jbv&lt;/ns3:ResponderRef&gt;       &lt;/SubscriptionAnswerInfo&gt;       &lt;Answer&gt;         &lt;ns3:ResponseStatus&gt;           &lt;ns3:ResponseTimestamp&gt;2009-02- 16T17:02:00+01:00&lt;/ns3:ResponseTimestamp&gt;         &lt;/ns3:ResponseStatus&gt;       &lt;/Answer&gt;       &lt;ns3:SubscriberRef&gt;SIRITest&lt;/ns3:SubscriberRef&gt;       &lt;ns3:SubscriptionRef&gt;ID8&lt;/ns3:SubscriptionRef&gt;       &lt;ns3:Status&gt;true&lt;/ns3:Status&gt;       &lt;ns3:ResponseStatus&gt;         &lt;ns3:ServiceStartTime&gt;2009-02- 10T09:07:58+01:00&lt;/ns3:ServiceStartTime&gt;       &lt;/ns3:ResponseStatus&gt;     &lt;/S:Body&gt;   &lt;/S:Envelope&gt;           </pre> |

### 4.1.3 Notification

```

<?xml version="1.0" ?>
<S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/">
  <S:Body>
    <ns2:NotifyEstimatedTimetable xmlns:ns2="http://siri.jbv.no"
      xmlns:ns3="http://www.siri.org.uk">
      <ServiceDeliveryInfo>
        <ns3:ResponseTimestamp>2009-01-26T15:49:48+01:00</ns3:ResponseTimestamp>
        <ns3:ProducerRef>jbv</ns3:ProducerRef>
      </ServiceDeliveryInfo>
      <Notification>
        <ns3:EstimatedTimetableDelivery version="1.0">
          <ns3:ResponseTimestamp>2009-01-26T15:49:48+01:00</ns3:ResponseTimestamp>
          <ns3:SubscriberRef>SIRITest</ns3:SubscriberRef>
          <ns3:SubscriptionRef>testsub1</ns3:SubscriptionRef>
          <ns3:EstimatedTimetableVersionFrame>
            <ns3:RecordedAtTime>2009-01-26T15:49:48+01:00</ns3:RecordedAtTime>
            <ns3:EstimatedVehicleJourney>
              <ns3:LineRef>L3</ns3:LineRef>
              <ns3:DirectionRef>ASR</ns3:DirectionRef>
              <ns3:DatedVehicleJourneyRef>2143_2009-01-26_14:54</ns3:DatedVehicleJourneyRef>
              <ns3:Cancellation>false</ns3:Cancellation>
              <ns3:VehicleMode>rail</ns3:VehicleMode>
              <ns3:OperatorRef>NSB</ns3:OperatorRef>
              <ns3:ProductCategoryRef>Lt</ns3:ProductCategoryRef>
              <ns3:ServiceFeatureRef>Pt</ns3:ServiceFeatureRef>
              <ns3:JourneyNote>via text de1</ns3:JourneyNote>
              <ns3:Monitored>true</ns3:Monitored>
            </ns3:EstimatedTimetableVersionFrame>
          </ns3:EstimatedTimetableDelivery>
        </Notification>
      </ns2:NotifyEstimatedTimetable>
    </S:Body>
  </S:Envelope>
          
```

```

<ns3:PredictionInaccurate>>false</ns3:PredictionInaccurate>
<ns3:VehicleRef>2143</ns3:VehicleRef>
<ns3:EstimatedCall>
  <ns3:StopPointRef>HVA</ns3:StopPointRef>
  <ns3:VisitNumber>1</ns3:VisitNumber>
  <ns3:StopPointName>Hvalstad</ns3:StopPointName>
  <ns3:VehicleAtStop>>false</ns3:VehicleAtStop >
  <ns3:Cancellation>>false</ns3:Cancellation>
  <ns3:PredictionInaccurate>>false</ns3:PredictionInaccurate>
  <ns3:RequestStop>>false</ns3:RequestStop>
  <ns3:DestinationDisplay>Asker</ns3:DestinationDisplay>
  <ns3:CallNote>NSB Lokaltog</ns3:CallNote>
  <ns3:AimedArrivalTime>2009-01-26T15:50:00+01:00</ns3:AimedArrivalTime>
  <ns3:ExpectedArrivalTime>2009-01-26T15:52:00.000+01:00</ns3:ExpectedArrivalTime>
  <ns3:ArrivalStatus>onTime</ns3:ArrivalStatus>
  <ns3:ArrivalPlatformName>2</ns3:ArrivalPlatformName>
  <ns3:ArrivalBoardingActivity>alighting</ns3:ArrivalBoardingActivity>
  <ns3:AimedDepartureTime>2009-01-26T15:50:00+01:00</ns3:AimedDepartureTime>
  <ns3:ExpectedDepartureTime>2009-01-
26T15:52:00.000+01:00</ns3:ExpectedDepartureTime>
  <ns3:DepartureStatus>onTime</ns3:DepartureStatus>
  <ns3:DeparturePlatformName>2</ns3:DeparturePlatformName>
  <ns3:DepartureBoardingActivity>boarding</ns3:DepartureBoardingActivity>
  <ns3:Extensions>
    <ns3:CallMonitored>>true</ns3:CallMonitored>
    <ns3:DataSource>RPS</ns3:DataSource>
    <ns3:StopsAtAirport>>false</ns3:StopsAtAirport>
  </ns3:Extensions>
</ns3:EstimatedCall>
<ns3:Extensions>
  <ns3:TrainKind>Pt</ns3:TrainKind>
  <ns3:TrainType>IC</ns3:TrainType>
  <ns3:OriginCity>
    <ns3:CityCode>LLS</ns3:CityCode>
    <ns3:CityName>Lillestrøm</ns3:CityName>
  </ns3:OriginCity>
</ns3:Extensions>
</ns3:EstimatedVehicleJourney>
</ns3:EstimatedTimetableVersionFrame>
</ns3:EstimatedTimetableDelivery>
</Notification>
<NotifyExtension/>
</ns2:NotifyEstimatedTimetable>
</S:Body>
</S:Envelope>
    
```

#### 4.1.4 DeleteSubscription

| XML request  | XML response   |
|--|--|
| <pre> &lt;SOAP-ENV:Envelope xmlns:SOAP- ENV="http://schemas.xmlsoap.org/soap/en velope/"&gt;   &lt;SOAP-ENV:Header/&gt;   &lt;SOAP-ENV:Body&gt;     &lt;oxy:DeleteSubscription xmlns:oxy="http://siri.jbv.no"&gt;       &lt;DeleteSubscriptionInfo&gt;         &lt;RequestorRef xmlns="http://www.siri.org.uk/" &gt;SIRITest&lt;/RequestorRef&gt;       &lt;/DeleteSubscriptionInfo&gt;     &lt;/Request&gt;   &lt;/SubscriptionRef     </pre> | <pre> &lt;?xml version="1.0" ?&gt; &lt;S:Envelope xmlns:S="http://schemas.xmlsoap.org/soap/envelope/"&gt;   &lt;S:Body&gt;     &lt;ns2:DeleteSubscriptionResponse xmlns:ns2="http://siri.jbv.no" xmlns:ns3="http://www.siri.org.uk"&gt;       &lt;DeleteSubscriptionAnswerInfo&gt;         &lt;ns3:ResponseTimestamp&gt;2009-02- 24T08:41:50+01:00&lt;/ns3:ResponseTimestamp&gt;         &lt;ns3:ResponderRef&gt;jbv&lt;/ns3:ResponderRef&gt;       &lt;/DeleteSubscriptionAnswerInfo&gt;     &lt;/Answer&gt;     &lt;ns3:TerminationResponseStatus&gt;     </pre> |

|  |   |
|--|---|
| <pre> xmlns="http://www.siri.org.uk"   &gt;ID5&lt;/SubscriptionRef&gt;   &lt;/Request&gt;   &lt;RequestExtension/&gt;   &lt;/oxy:DeleteSubscription&gt;   &lt;/SOAP-ENV:Body&gt; &lt;/SOAP-ENV:Envelope&gt;                 </pre> | <pre> &lt;ns3:ResponseTimestamp&gt;2009-02- 24T08:41:50+01:00&lt;/ns3:ResponseTimestamp&gt; &lt;ns3:SubscriberRef&gt;SIRITest&lt;/ns3:SubscriberRef&gt; &lt;ns3:SubscriptionRef&gt;ID5&lt;/ns3:SubscriptionRef&gt; &lt;ns3:Status&gt;true&lt;/ns3:Status&gt; &lt;/ns3:TerminationResponseStatus&gt; &lt;/Answer&gt; &lt;AnswerExtension/&gt; &lt;/ns2:DeleteSubscriptionResponse&gt; &lt;/S:Body&gt; &lt;/S:Envelope&gt;                 </pre> |
|--|---|

#### 4.1.5 NotifyHeartbeat

```

<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header/>
  <SOAP-ENV:Body>
    <oxy:NotifyHeartbeat xmlns:oxy="http://siri.jbv.no">
      <HeartbeatNotifyInfo>
        <RequestTimestamp xmlns="http://www.siri.org.uk/">2009-02-
24T08:41:50+01:00</RequestTimestamp>
        <ProducerRef
xmlns="http://www.siri.org.uk/">jbv_EstimatedTimetable_subscriptionID</ProducerRef>
        <HeartbeatNotifyInfo>
          <Notification>
            <Status xmlns="http://www.siri.org.uk/">true</Status>
            <ShortestPossibleCycle xmlns="http://www.siri.org.uk/"
              >PT1M</ShortestPossibleCycle>
            <ServiceStartedTime xmlns="http://www.siri.org.uk/">2009-02-
01T08:41:50+01:00</ServiceStartedTime>
          </Notification>
          <SiriExtension>
            <SubscriptionID>subscriptionID</SubscriptionID>
          </SiriExtension>
        </oxy:NotifyHeartbeat>
      </SOAP-ENV:Body>
    </SOAP-ENV:Envelope>
                
```

## 4.2 REST examples

### 4.2.1 Stop Monitoring service

Request:

<http://192.168.67.11:10000/StopMonitoring?MonitoringRef=SKK&StartTime=2011-05-05T07:17:44.1669195+01:00&StopVisitTypes=Departure&StopVisit=1&PreviewInterval=PT4H>

Response:

```

<?xml version="1.0" encoding="UTF-8" ?>
<Siri xmlns="http://www.siri.org.uk/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.siri.org.uk/ http://www.siri.org.uk/schema/1.0/siri.xsd"
  version="1.0">
  <ServiceDelivery>
    <ResponseTimestamp>2011-05-05T15:49:56+02:00</ResponseTimestamp>
    <ProducerRef>jbv</ProducerRef>
    <StopMonitoringDelivery version="1.0">
                
```



```
<ResponseTimestamp>2011-05-05T15:49:56+02:00</ResponseTimestamp>
<MonitoredStopVisit>
  <RecordedAtTime>2011-05-05T08:45:24+02:00</RecordedAtTime>
  <ItemIdentifier>573540670</ItemIdentifier>
  <MonitoringRef>SKK</MonitoringRef>
  <LineRef>L4</LineRef>
  <DirectionRef>LVK</DirectionRef>
  <FramedVehicleJourneyRef>
    <DataFrameRef>2011-05-05</DataFrameRef>
    <DatedVehicleJourneyRef>803_2011-05-05_06:43</DatedVehicleJourneyRef>
  </FramedVehicleJourneyRef>
  <PublishedLineName>Larvik</PublishedLineName>
  <OperatorRef>NSB</OperatorRef>
  <ProductCategoryRef>IC</ProductCategoryRef>
  <ServiceFeatureRef>Pt</ServiceFeatureRef>
  <OriginRef>LHM</OriginRef>
  <OriginName>Lillehammer</OriginName>
  <DestinationName>Larvik</DestinationName>
  <Monitored>true</Monitored>
  <Delay>P0Y0M0DT0H1M46.000S</Delay>
  <VehicleRef>803</VehicleRef>
  <StopPointRef>SKK</StopPointRef>
  <VisitNumber>1</VisitNumber>
  <StopPointName>Stokke</StopPointName>
  <RequestStop>>false</RequestStop>
  <DestinationDisplay>Larvik</DestinationDisplay>
  <AimedArrivalTime>2011-05-05T08:25:00+02:00</AimedArrivalTime>
  <ActualArrivalTime>2011-05-05T08:24:39+02:00</ActualArrivalTime>
  <ArrivalStatus>arrived</ArrivalStatus>
  <ArrivalPlatformName>1</ArrivalPlatformName>
  <ArrivalBoardingActivity>alighting</ArrivalBoardingActivity>
  <AimedDepartureTime>2011-05-05T08:25:00+02:00</AimedDepartureTime>
  <ActualDepartureTime>2011-05-05T08:26:46+02:00</ActualDepartureTime>
  <DepartureStatus>noReport</DepartureStatus>
  <DeparturePlatformName>1</DeparturePlatformName>
  <DepartureBoardingActivity>boarding</DepartureBoardingActivity>
  <NextStopPointName>Torp hp</NextStopPointName>
  <StopVisitNote>NSB Regiontog - Via Torp - Stopper ved
    alle stasjoner. Togbuss til Skien</StopVisitNote>
  <Extensions>
    <TrainKind>Pt</TrainKind>
    <TrainType>IC</TrainType>
    <StopsAtAirport>>false</StopsAtAirport>
  </Extensions>
</MonitoredStopVisit>
<MonitoredStopVisitCancellation>
  <RecordedAtTime>2011-05-05T09:57:26+02:00</RecordedAtTime>
  <ItemRef>573541618</ItemRef>
  <MonitoringRef>SKK</MonitoringRef>
</MonitoredStopVisitCancellation>
```

```
<VisitNumber>1</VisitNumber>
<LineRef>L4</LineRef>
<DirectionRef>LHM</DirectionRef>
<VehicleJourneyRef>
  <DataFrameRef>2011-05-05</DataFrameRef>
  <DatedVehicleJourneyRef>812_2011-05-05_08:22</DatedVehicleJourneyRef>
</VehicleJourneyRef>
<PublishedLineName>Lillehammer</PublishedLineName>
<Reason/>
</MonitoredStopVisitCancellation>
<MonitoredStopVisitCancellation>
  <RecordedAtTime>2011-05-05T10:31:45+02:00</RecordedAtTime>
  <ItemRef>573540842</ItemRef>
  <MonitoringRef>SKK</MonitoringRef>
  <VisitNumber>1</VisitNumber>
  <LineRef>LHM-SKN</LineRef>
  <DirectionRef>SKN</DirectionRef>
  <VehicleJourneyRef>
    <DataFrameRef>2011-05-05</DataFrameRef>
    <DatedVehicleJourneyRef>805_2011-05-05_07:43</DatedVehicleJourneyRef>
  </VehicleJourneyRef>
  <PublishedLineName>Skien</PublishedLineName>
  <Reason/>
  <Extensions>
    <TrainKind>Pt</TrainKind>
    <TrainType>Lt</TrainType>
    <ArrivalCallCancellation>B</ArrivalCallCancellation>
    <DepartureCallCancellation>B</DepartureCallCancellation>
    <StopsAtAirport>>false</StopsAtAirport>
  </Extensions>
</MonitoredStopVisitCancellation>
</StopMonitoringDelivery>
</ServiceDelivery>
</Siri>
```

#### 4.2.2 Vehicle Monitoring service

Request:

[http://192.168.67.11:10000/VehicleMonitoring/127\\_2010-03-23\\_18:00?StopVisit=1](http://192.168.67.11:10000/VehicleMonitoring/127_2010-03-23_18:00?StopVisit=1)

Response:

```
<?xml version="1.0" encoding="UTF-8" ?>
<Siri xmlns="http://www.siri.org.uk/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.siri.org.uk/ http://www.siri.org.uk/schema/1.0/siri.xsd"
  version="1.0">
  <ServiceDelivery>
    <ResponseTimestamp>2010-03-23T17:30:21+01:00</ResponseTimestamp>
    <ProducerRef>jbv</ProducerRef>
    <Status>>true</Status>
    <VehicleMonitoringDelivery version="1.0">
```



```
<ResponseTimestamp>2010-03-23T17:30:21+01:00</ResponseTimestamp>
<VehicleActivity>
  <RecordedAtTime>2010-03-23T17:30:21+01:00</RecordedAtTime>
  <ItemIdentifier>8626201</ItemIdentifier>
  <ValidUntilTime>2010-03-23T17:30:21+01:00</ValidUntilTime>
  <VehicleMonitoringRef>127_2010-03-23_18:00</VehicleMonitoringRef>
  <MonitoredVehicleJourney>
    <LineRef>L12</LineRef>
    <DirectionRef>GTB</DirectionRef>
    <FramedVehicleJourneyRef>
      <DataFrameRef>2010-03-23</DataFrameRef>
      <DatedVehicleJourneyRef>127_2010-03-23_18:00</DatedVehicleJourneyRef>
    </FramedVehicleJourneyRef>
    <PublishedLineName>Gøteborg</PublishedLineName>
    <OperatorRef>NSB</OperatorRef>
    <ProductCategoryRef>IC</ProductCategoryRef>
    <ServiceFeatureRef>Pt</ServiceFeatureRef>
    <OriginRef>OSL</OriginRef>
    <OriginName>Oslo S</OriginName>
    <DestinationRef>GTB</DestinationRef>
    <DestinationName>Gøteborg</DestinationName>
    <DestinationShortName>GTB</DestinationShortName>
    <Monitored>true</Monitored>
    <PredictionInaccurate>>false</PredictionInaccurate>
    <DataSource>ROLLONOFF</DataSource>
    <VehicleLocation>
      <Longitude>11.09698</Longitude>
      <Latitude>60.1927</Latitude>
    </VehicleLocation>
    <VehicleRef>127</VehicleRef>
    <MonitoredCall>
      <StopPointRef>OSL</StopPointRef>
      <VisitNumber>1</VisitNumber>
      <StopPointName>Oslo S</StopPointName>
      <VehicleAtStop>>false</VehicleAtStop>
      <RequestStop>>false</RequestStop>
      <DestinationDisplay>Gøteborg</DestinationDisplay>
      <CallNote>NSB Regiontog – Stopper ved Moss, Rygge, Råde, Fredrikstad og
Sarpsborg</CallNote>
      <AimedArrivalTime>2010-03-23T18:00:00+01:00</AimedArrivalTime>
      <ExpectedArrivalTime>2010-03-23T18:00:00+01:00</ExpectedArrivalTime>
      <ArrivalStatus>onTime</ArrivalStatus>
      <ArrivalPlatformName>18</ArrivalPlatformName>
      <ArrivalBoardingActivity>noAlighting</ArrivalBoardingActivity>
      <AimedDepartureTime>2010-03-23T18:00:00+01:00</AimedDepartureTime>
      <ExpectedDepartureTime>2010-03-23T18:00:00+01:00</ExpectedDepartureTime>
      <DepartureStatus>onTime</DepartureStatus>
      <DeparturePlatformName>18</DeparturePlatformName>
      <DepartureBoardingActivity>boarding</DepartureBoardingActivity>
    </MonitoredCall>
    <Extensions>
      <CallMonitored>true</CallMonitored>
      <StopsAtAirport>>false</StopsAtAirport>
    </Extensions>
  </MonitoredVehicleJourney>
</VehicleActivity>
```



```
</Extensions>
</MonitoredCall>
<OnwardCalls>
  <OnwardCall>
    <StopPointRef>SKI</StopPointRef>
    <VisitNumber>1</VisitNumber>
    <StopPointName>Ski</StopPointName>
    <VehicleAtStop>false</VehicleAtStop>
    <AimedArrivalTime>2010-03-23T18:21:00+01:00</AimedArrivalTime>
    <ExpectedArrivalTime>2010-03-23T18:21:00+01:00</ExpectedArrivalTime>
    <ArrivalStatus>onTime</ArrivalStatus>
    <ArrivalBoardingActivity>noAlighting</ArrivalBoardingActivity>
    <AimedDepartureTime>2010-03-23T18:22:00+01:00</AimedDepartureTime>
    <ExpectedDepartureTime>2010-03-23T18:22:00+01:00</ExpectedDepartureTime>
    <DepartureStatus>onTime</DepartureStatus>
    <DepartureBoardingActivity>boarding</DepartureBoardingActivity>
  </OnwardCall>
  <OnwardCall>
    <StopPointRef>MOS</StopPointRef>
    <VisitNumber>1</VisitNumber>
    <StopPointName>Moss</StopPointName>
    <VehicleAtStop>false</VehicleAtStop>
    <AimedArrivalTime>2010-03-23T18:41:00+01:00</AimedArrivalTime>
    <ExpectedArrivalTime>2010-03-23T18:41:00+01:00</ExpectedArrivalTime>
    <ArrivalStatus>onTime</ArrivalStatus>
    <ArrivalBoardingActivity>alighting</ArrivalBoardingActivity>
    <AimedDepartureTime>2010-03-23T18:43:00+01:00</AimedDepartureTime>
    <ExpectedDepartureTime>2010-03-23T18:43:00+01:00</ExpectedDepartureTime>
    <DepartureStatus>onTime</DepartureStatus>
    <DepartureBoardingActivity>boarding</DepartureBoardingActivity>
  </OnwardCall>
  <OnwardCall>
    <StopPointRef>RYG</StopPointRef>
    <VisitNumber>1</VisitNumber>
    <StopPointName>Rygge</StopPointName>
    <VehicleAtStop>false</VehicleAtStop>
    <AimedArrivalTime>2010-03-23T18:50:00+01:00</AimedArrivalTime>
    <ExpectedArrivalTime>2010-03-23T18:50:00+01:00</ExpectedArrivalTime>
    <ArrivalStatus>onTime</ArrivalStatus>
    <ArrivalBoardingActivity>alighting</ArrivalBoardingActivity>
    <AimedDepartureTime>2010-03-23T18:50:00+01:00</AimedDepartureTime>
    <ExpectedDepartureTime>2010-03-23T18:50:00+01:00</ExpectedDepartureTime>
    <DepartureStatus>onTime</DepartureStatus>
    <DepartureBoardingActivity>boarding</DepartureBoardingActivity>
  </OnwardCall>
  <OnwardCall>
    <StopPointRef>RÅD</StopPointRef>
    <VisitNumber>1</VisitNumber>
    <StopPointName>Råde</StopPointName>
    <VehicleAtStop>false</VehicleAtStop>
    <AimedArrivalTime>2010-03-23T18:56:00+01:00</AimedArrivalTime>
    <ExpectedArrivalTime>2010-03-23T18:56:00+01:00</ExpectedArrivalTime>
```

```
<ArrivalStatus>onTime</ArrivalStatus>
<ArrivalBoardingActivity>alighting</ArrivalBoardingActivity>
<AimedDepartureTime>2010-03-23T18:56:00+01:00</AimedDepartureTime>
<ExpectedDepartureTime>2010-03-23T18:56:00+01:00</ExpectedDepartureTime>
<DepartureStatus>onTime</DepartureStatus>
<DepartureBoardingActivity>boarding</DepartureBoardingActivity>
</OnwardCall>
<OnwardCall>
  <StopPointRef>FRE</StopPointRef>
  <VisitNumber>1</VisitNumber>
  <StopPointName>Fredrikstad</StopPointName>
  <VehicleAtStop>false</VehicleAtStop>
  <AimedArrivalTime>2010-03-23T19:07:00+01:00</AimedArrivalTime>
  <ExpectedArrivalTime>2010-03-23T19:07:00+01:00</ExpectedArrivalTime>
  <ArrivalStatus>onTime</ArrivalStatus>
  <ArrivalBoardingActivity>alighting</ArrivalBoardingActivity>
  <AimedDepartureTime>2010-03-23T19:09:00+01:00</AimedDepartureTime>
  <ExpectedDepartureTime>2010-03-23T19:09:00+01:00</ExpectedDepartureTime>
  <DepartureStatus>onTime</DepartureStatus>
  <DepartureBoardingActivity>boarding</DepartureBoardingActivity>
</OnwardCall>
<OnwardCall>
  <StopPointRef>SBO</StopPointRef>
  <VisitNumber>1</VisitNumber>
  <StopPointName>Sarpsborg</StopPointName>
  <VehicleAtStop>false</VehicleAtStop>
  <AimedArrivalTime>2010-03-23T19:22:00+01:00</AimedArrivalTime>
  <ExpectedArrivalTime>2010-03-23T19:22:00+01:00</ExpectedArrivalTime>
  <ArrivalStatus>onTime</ArrivalStatus>
  <ArrivalBoardingActivity>noAlighting</ArrivalBoardingActivity>
  <AimedDepartureTime>2010-03-23T19:24:00+01:00</AimedDepartureTime>
  <ExpectedDepartureTime>2010-03-23T19:24:00+01:00</ExpectedDepartureTime>
  <DepartureStatus>onTime</DepartureStatus>
  <DepartureBoardingActivity>boarding</DepartureBoardingActivity>
</OnwardCall>
<OnwardCall>
  <StopPointRef>HLD</StopPointRef>
  <VisitNumber>1</VisitNumber>
  <StopPointName>Halden</StopPointName>
  <VehicleAtStop>false</VehicleAtStop>
  <AimedArrivalTime>2010-03-23T19:44:00+01:00</AimedArrivalTime>
  <ExpectedArrivalTime>2010-03-23T19:44:00+01:00</ExpectedArrivalTime>
  <ArrivalStatus>onTime</ArrivalStatus>
  <ArrivalBoardingActivity>alighting</ArrivalBoardingActivity>
  <DepartureBoardingActivity>noBoarding</DepartureBoardingActivity>
</OnwardCall>
</OnwardCalls>
</MonitoredVehicleJourney>
<Extensions>
  <TrainKind>Pt</TrainKind>
  <TrainType>IC</TrainType>
</Extensions>
```



```
</VehicleActivity>
</VehicleMonitoringDelivery>
</ServiceDelivery>
</Siri>
```

#### 4.2.3 EstimatedTimetable service

Request:

<http://192.168.67.11:10000/EstimatedTimetable?AreaRef=LRK>

Response:

```
<?xml version="1.0" encoding="UTF-8" ?>
<Siri xsi:schemaLocation="http://www.siri.org.uk/ http://www.siri.org.uk/schema/1.0/siri.xsd"
version="1.0">
  <ServiceDelivery>
    <ResponseTimestamp>2010-09-22T15:30:16+02:00</ResponseTimestamp>
    <ProducerRef>jbv</ProducerRef>
    <EstimatedTimetableDelivery version="1.0">
      <ResponseTimestamp>2010-09-22T15:30:16+02:00</ResponseTimestamp>
      <EstimatedTimetableVersionFrame>
        <RecordedAtTime>2010-09-22T15:30:16+02:00</RecordedAtTime>
        <EstimatedVehicleJourney>
          <LineRef>STK-MBG</LineRef>
          <DirectionRef>MBG</DirectionRef>
          <DatedVehicleJourneyRef>438_2010-09-22_13:28</DatedVehicleJourneyRef>
          <Cancellation>>false</Cancellation>
          <VehicleMode>rail</VehicleMode>
          <OperatorRef>NSB</OperatorRef>
          <ProductCategoryRef>Lt</ProductCategoryRef>
          <ServiceFeatureRef>Pt</ServiceFeatureRef>
          <Monitored>>true</Monitored>
          <PredictionInaccurate>>false</PredictionInaccurate>
          <VehicleRef>438</VehicleRef>
          <EstimatedCall>
            <StopPointRef>LRK</StopPointRef>
            <VisitNumber>1</VisitNumber>
            <StopPointName>Lerkendal</StopPointName>
            <Cancellation>>false</Cancellation>
            <PredictionInaccurate>>false</PredictionInaccurate>
            <RequestStop>>false</RequestStop>
            <DestinationDisplay>Marienborg</DestinationDisplay>
            <CallNote>NSB Lokaltog</CallNote>
            <AimedArrivalTime>2010-09-22T15:45:00+02:00</AimedArrivalTime>
            <ExpectedArrivalTime>2010-09-22T15:45:00+02:00</ExpectedArrivalTime>
            <ArrivalStatus>onTime</ArrivalStatus>
            <ArrivalBoardingActivity>alighting</ArrivalBoardingActivity>
            <AimedDepartureTime>2010-09-22T15:56:00+02:00</AimedDepartureTime>
            <ExpectedDepartureTime>2010-09-22T15:56:00+02:00</ExpectedDepartureTime>
            <DepartureStatus>onTime</DepartureStatus>
            <DepartureBoardingActivity>boarding</DepartureBoardingActivity>
            <Extensions>
              <CallMonitored>>true</CallMonitored>
              <DataSource>RPS</DataSource>
              <StopsAtAirport>>false</StopsAtAirport>
```

```

        </Extensions>
    </EstimatedCall>
    <Extensions>
        <TrainKind>Pt</TrainKind>
        <TrainType>Lt</TrainType>
        <OriginCity>
            <CityCode>STK</CityCode>
            <CityName>Steinkjer</CityName>
        </OriginCity>
    </Extensions>
</EstimatedVehicleJourney>
</EstimatedTimetableVersionFrame>
</EstimatedTimetableDelivery>
</ServiceDelivery>
</Siri>
    
```

#### 4.2.4 ProductionTimetable service

Request:

<http://192.168.67.11:10000/ProductionTimetable?AreaRef=LRK>

Response:

```

<?xml version="1.0" encoding="UTF-8" ?>
<Siri xsi:schemaLocation="http://www.siri.org.uk/ http://www.siri.org.uk/schema/1.0/siri.xsd"
version="1.0">
    <ServiceDelivery>
        <ResponseTimestamp>2010-09-22T16:15:43+02:00</ResponseTimestamp>
        <ProducerRef>jbv</ProducerRef>
        <ProductionTimetableDelivery version="1.0">
            <ResponseTimestamp>2010-09-22T16:15:43+02:00</ResponseTimestamp>
            <DatedTimetableVersionFrame>
                <RecordedAtTime>2010-09-22T16:15:43+02:00</RecordedAtTime>
                <LineRef>MBG-STK</LineRef>
                <DirectionRef>STK</DirectionRef>
                <OperatorRef>NSB</OperatorRef>
                <ProductCategoryRef>Lt</ProductCategoryRef>
                <ServiceFeatureRef>Pt</ServiceFeatureRef>
                <DestinationDisplay>Steinkjer</DestinationDisplay>
                <Monitored>true</Monitored>
                <DatedVehicleJourney>
                    <DatedVehicleJourneyCode>1761_2010-09-21_14:10</DatedVehicleJourneyCode>
                    <Cancellation>false</Cancellation>
                    <VehicleMode>rail</VehicleMode>
                    <OperatorRef>NSB</OperatorRef>
                    <ProductCategoryRef>Lt</ProductCategoryRef>
                    <ServiceFeatureRef>Pt</ServiceFeatureRef>
                    <DestinationDisplay>Steinkjer</DestinationDisplay>
                    <Monitored>true</Monitored>
                    <DatedCall>
                        <StopPointRef>LRK</StopPointRef>
                        <VisitNumber>1</VisitNumber>
                        <StopPointName>Lerkendal</StopPointName>
                        <RequestStop>false</RequestStop>
                        <DestinationDisplay>Steinkjer</DestinationDisplay>
                        <AimedArrivalTime>2010-09-22T14:15:00+02:00</AimedArrivalTime>
                        <ArrivalBoardingActivity>noAlighting</ArrivalBoardingActivity>
                    </DatedCall>
                </DatedVehicleJourney>
            </DatedTimetableVersionFrame>
        </ProductionTimetableDelivery>
    </ServiceDelivery>
</Siri>
    
```



```
<AimedDepartureTime>2010-09-22T14:25:00+02:00</AimedDepartureTime>
<DepartureBoardingActivity>boarding</DepartureBoardingActivity>
<Extensions>
  <CallMonitored>true</CallMonitored>
  <DataSource>RPS</DataSource>
  <StopsAtAirport>>false</StopsAtAirport>
</Extensions>
</DatedCall>
<Extensions>
  <TrainNumber>454</TrainNumber>
  <TrainKind>Pt</TrainKind>
  <TrainType>Lt</TrainType>
  <OriginCity>
    <CityCode>MBG</CityCode>
    <CityName>Trondheim M</CityName>
  </OriginCity>
</Extensions>
</DatedVehicleJourney>
</DatedTimetableVersionFrame>
</ProductionTimetableDelivery>
</ServiceDelivery>
</Siri>
```

## 5 Description of chosen XML elements

| Element name                                 | Description  | Always present | Examples                                      |
|--|--|----------------|---|
| ArrivalPlatformName<br>DeparturePlatformName | Both elements are always set to the same value.  | No             | 13<br>2                                       |
| CallMonitored                                | Defined as a station where real-time prediction system is present (ATC).   | Yes            | true<br>false                                 |
| CallNote                                     | Defined as remarks on departure for PT and ET.<br>Defined as concatenated remarks on arrival and departure for VM.   | No             | Flytoget - Ingen avstigning før Oslo Lufthavn |
| DataFrameRef                                 | Origin date of the train.<br>Format is <YYYY>-<MM>-<DD>  | Yes            | 2010-03-23                                    |
| DataSource                                   | Application ID / System ID of last recorded modification of data delivered in that call/journey.   | No             | CTRIGGER<br>TRAFFIC                           |
| DatedVehicleJourneyCode                      | It is ID of a journey (just one physical train; not associated train trains). Such journey happens only once as part of ID is date and time of journey's origin departure.<br>Format is<br><train_number>_<origin_departure_datetime>.               | Yes            | 173_2009-01-22_12:53                          |
| DestinationShortName                         | Station's reference  | Yes            | ASR<br>GAR                                    |
| ExpectedArrivalTime<br>ExpectedDepartureTime | In Estimated Timetable values contain estimated times if corresponding status (ArrivalStatus/DepartureStatus) set other than 'arrived'. Otherwise elements contain registered times.   | No             | 2010-03-23T07:35:00+01:00                     |
| ItemIdentifier                               | For Stop Monitoring service defines id of call entry.<br>For Vehicle Monitoring service defined id of train entry.<br>Value is a number up to 12 digits.   | Yes            | 8564956                                       |
| LineRef                                      | Train line reference or associated journeys origin and destination references if line reference not available.<br>When set of station references used then origin/destination here can be stop station for another associated train if there is one. | Yes            | L2<br>ASR-GAR<br>SKØ-SKI                      |
| Monitored                                    | Defined as a station where real-time prediction system is present (ATC).   | Yes            | yes<br>false                                  |

|                      |  |     |                                      |
|----------------------|--|-----|--------------------------------------|
|                      | Valid only for Stop Monitoring Timetable. In others value is undefined. Look into CallMonitored element instead.   |     |                                      |
| NextStopPointName    | Gives name (or reference if name not found) of next station that has arrival time set. Algorithm does not consider cancellations.  | No  | Hellerud SOA                         |
| PredictionInaccurate | Set to true whenever train is discovered to move slowly or stopped between stations.   | Yes | false<br>true                        |
| ProducerRef          | Static value describing SIRI web-service ID.   | Yes | jbv                                  |
| ProductCategoryRef   | Equal to TrainType.  | Yes | Lt<br>IC                             |
| PublishedLineName    | Equal to DestinationDisplay. Contains reference instead of a name if name not available.   | Yes | Hellerud SOA                         |
| RecordedAtTime       | For Stop Monitoring Timetable date of last change of data related to the call (not journey). For other services it is time of data fetch from database.  | Yes | 2009-02-10T09:07:58+01:00            |
| ServiceFeatureRef    | Equal to TrainKind.  | Yes | Pt                                   |
| ServiceStartedTime   | Date of SIRI web-service start alone. It does not reflect start time of any other part of the system.  | Yes | 2010-03-23T17:49:19+01:00            |
| Status               | True whenever request could be parsed, validated and handled. Even though status is true, warnings can be present in response or no data returned (for example when no fitting data available).                        | No  | true<br>false                        |
| StopVisitNote        | Separate elements (0-2) can contain arrival remarks and/or departure remarks.  | No  | Flytoget – Direkte til Oslo Lufthavn |
| SubscriptionID       | In NotifyHeartbeat service points to the particular subscription that is regarded still alive.   | Yes | ETsub                                |
| TrainBecomes         | Defines one of two possible train associations. Defines OF association. DatedVehicleJourney changes to new one at the station of the call. Physical train stays the same. Format is <train_number>_<origin_date>_00:00 | No  | 174_2009-02-15_00:00                 |
| TrainKind            | Defines train kind. Available values defined further in the chapter.   | Yes | Pt<br>Ept<br>Bu                      |
| TrainNumber          | Defines train number of the vehicle. It is part of DatedVehicleJourneyCode (or other service equivalent).  | Yes | 174<br>816B                          |

|                |   |     |                      |
|----------------|---|-----|----------------------|
|                | Value is a string of maximum 5 alphanumeric characters.   |     |                      |
| TrainSwitches  | Defines one of two possible train associations.<br>Defines CX association. Element defines second physical train.<br>Association happens at the station of the call.<br>Format is<br><train_number>_<origin_date>_00:00 | No  | 174_2009-02-15_00:00 |
| TrainType      | Defines train type. Available values defined further in the chapter.  | Yes | Et<br>IC<br>Pt       |
| ValidUntilTime | Set to system time.   | Yes |                      |
| VehicleAtStop  | Defines if train is at the station at the moment.<br>Available for station with real-time prediction system present (ATC).  | Yes | false<br>true        |
| VehicleMode    | By default defined as RAIL.<br>Defined as BUS for journeys that are created as bus journeys.<br>Defined as BUS for journeys that are fully replaced by buses.   | Yes | rail<br>bus          |

List of implemented error condition structures to be returned:

- AccessNotAllowedError
- CapabilityNotSupportedError
- OtherError

Train kinds:

| TrainKind | Description in Norwegian | Description in English      |
|-----------|--------------------------|-----------------------------|
| Bu        | Bus                      | Bus                         |
| <space>   | Andre tog                | Other train                 |
| A         | Arbeidstog               | Maintanance train           |
| EGt       | Ekstra godstog           | Additional freight train    |
| EK        | Ekstra kiptog            | Additional side dump car    |
| EL        | Ekstra løsløk            | Additional locomotive       |
| Ept       | Ekstra persontog         | Additional passengers train |
| ET        | Ekstra tomtog            | Additional empty train      |
| Gt        | Godstog                  | Freight train               |
| K         | Kiptog                   | Side dump car               |
| L         | Løsløk                   | Locomotive                  |
| Pt        | Persontog                | Passengers train            |
| T         | Tomtog                   | Empty train                 |
| TU        | Tomtog Uten rute         | Empty train out of route    |
| LU        | Løsløk Uten rute         | Locomotive off the route    |
| KU        | Kiptog Uten rute         | Side dump car off the route |
| .         | Andre Tog                | Other train                 |

Train types:

| TrainType | Description in Norwegian                           | Description in English                          |
|-----------|--|---|
| EC        | NSB Regiontog                                      | NSB regional train                              |
| Et        | NSB Regiontog                                      | NSB regional train                              |
| IC        | NSB Regiontog                                      | NSB regional train                              |
| ICE       | NSB Regiontog                                      | NSB regional train                              |
| IN        | SJ   |   |
| INN       | NSB Regiontog                                      | NSB regional train                              |
| Lt        | NSB Lokaltog                                       | NSB local train                                 |
| Nt        | NSB Regiontog                                      | NSB regional train                              |
| Rt        | NSB Regiontog                                      | NSB regional train                              |
| Dt        | NSB Regiontog                                      | NSB regional train                              |
| GMB       | Flytoget   | Airport train                                   |
| Pt        | NSB Regiontog                                      | NSB regional train                              |
|           | Andre Tog - Buges til tog uden togtype - ikke slet | Other train – Used for train without train type |
| CHT       | Chartertog   | Charter train                                   |
| St        | NSB Regiontog                                      | NSB regional train                              |
| Ag        | NSB Regiontog                                      | NSB regional train                              |
| BUS       | NSB  |   |
| .         |  |   |
| Gl        | NSB Gjøvikbanen                                    | NSB Gjøvik train station train                  |
| Li        | NSB/SJ   |   |
| Fm        | Flåmsbanen   | Flåms train station train                       |
| Lx        | NSB/Tågkompaniet                                   | NSB's train                                     |
| Gr        | NSB Gjøvikbanen                                    | NSB Gjøvik train station train                  |
| To        | NSB  |   |
| Ts        | NSB  |   |
| Gt        | Godstog  | Freight train                                   |

## 6 Creating a consumer

To write a consumer that utilizes SIRI Web Service, plenty of tools and approaches can be used. Down here in this chapter one of them is presented.

In general consumer can operate on the level of TCP/IP sockets, use some simple libraries that help to parse HTTP, SOAP or even XML structures, or use kind of library that automates whole process and gives access to representation of data in memory structures of used programming language.

As an example how to create consumer, Glassfish<sup>2</sup> project will be used. It contains JAX-B<sup>3</sup> and JAX-WS<sup>4</sup> subprojects that are used for translation of schema files into JAVA classes as well as for skeleton creation of application.

When Glassfish project is installed and schema files are downloaded to local machine, script can be used for generation of class files and application skeleton for Consumer (Windows version):

```
mkdir sourceC
mkdir outputC
wsimport.bat siri_wsConsumer.wsdl -s sourceC -d outputC -b siri.xsd > out.txt
2>&1
```

, where *wsimport.bat* can be found in Glassfish' bin directory, *siri\_wsConsumer.wsdl* and *siri.xsd* are available in schema definitions package. Producer code generation look very similar:

```
mkdir sourceP
mkdir outputP
wsimport.bat siri_wsProducer.wsdl -s sourceP -d outputP -b siri.xsd > out.txt
2>&1
```

In *source\** directory lot of files is created. In general for both consumer and producer uk.org.siri package looks the same. But two files contained in no.jbv.siri package differ. Suggestion is to rename one set of them for consumer or producer if both used in the same project. For example:

```
SiriServices.java    ->    SiriServicesConsumer.java
SOAPPort.java       ->    SOAPPortConsumer.java
```

Schema paths in *SiriServices.java* and in *SOAPPort.java* files have to be set accordingly to schema placement.

When application acts as a server, *SOAPPort* interface file have to have its own implementation.

Below example of main code that acts as Producer's server.

```
package no.jbv.siri;

import javax.xml.ws.Endpoint;

public class SIRI {
    private static SIRIImpl siriImpl = null;
    @SuppressWarnings("unused")
    private static Endpoint soapServer = null;

    public static void main(String[] args) {
        siriImpl = new SIRIImpl ();
        soapServer = Endpoint.publish ("http://127.0.0.1:9000/", siriImpl);
        // soapServer.stop ();
    }
}
```

<sup>2</sup> <https://glassfish.dev.java.net/>

<sup>3</sup> <https://jaxb.dev.java.net/>

<sup>4</sup> <https://jax-ws.dev.java.net/>



```
}
```

*SIRIImpl* class above is the implementation of *SOAPPort* interface.

To write Consumer's server similar approach has to be used. It means that *SOAPPort* (from Consumer's schema) interface has to be implemented, object created and published.

Below example of main code that acts as Consumer's client.

```
package no.jbv.siri;

import javax.xml.ws.BindingProvider;
import javax.xml.ws.Holder;
import javax.xml.ws.WebServiceException;

import uk.org.siri.CheckStatusResponseBodyStructure;
import uk.org.siri.ExtensionsStructure;
import uk.org.siri.ParticipantRefStructure;
import uk.org.siri.ProducerResponseEndpointStructure;
import uk.org.siri.RequestStructure;

import no.jbv.siri.CheckStatusError;
import no.jbv.siri.SOAPPort;
import no.jbv.siri.SiriServices;

public class SIRIConsumerTest {

    // checkStatus variables to be sent
    private static RequestStructure chkRequest = new RequestStructure ();
    private static ExtensionsStructure chkRequestExtension =
        new ExtensionsStructure ();
    private static Holder<ProducerResponseEndpointStructure>
chkCheckStatusAnswerInfo = new Holder<ProducerResponseEndpointStructure> ();
    private static Holder<CheckStatusResponseBodyStructure>
chkAnswer = new Holder<CheckStatusResponseBodyStructure> ();
    private static Holder<ExtensionsStructure>
chkAnswerExtension = new Holder<ExtensionsStructure> ();

    public static void main (String[] args) {
        SiriServices services = new SiriServices ();
        SOAPPort port = services.getSiriWSPort ();
        try {
            ((BindingProvider) port).getRequestContext ().put (
                BindingProvider.ENDPOINT_ADDRESS_PROPERTY,
                "http://127.0.0.1:9000/");
        } catch (WebServiceException wse) {
            wse.printStackTrace ();
        }
        ParticipantRefStructure parRefStruc = new ParticipantRefStructure ();
        parRefStruc.setValue ("justTest");
        chkRequest.setRequestorRef (parRefStruc);
        try {
            port.checkStatus (chkRequest, chkRequestExtension,
                chkCheckStatusAnswerInfo, chkAnswer,
                chkAnswerExtension);
        } catch (CheckStatusError e) {
            e.printStackTrace ();
        }
        System.out.println (chkAnswer.value.getServiceStartedTime ());
    }
}
```

## 7 Issues

**Lines** (connection between cities) are not always well defined. Sometimes they are loosely defined as set of two stations: origin and destination.

**JourneyCodes** are given, but regarding to the method used and filtering applied can happen that data doesn't cover whole journey. There is no way to assure that whole journey is sent.

**TimetableVersionRef, IncrementalUpdates** elements are ignored for request messages.

**Automatic deletion of subscriptions** is done in few situations:

- SIRI service application startup for given consumer
- configured/given consumer service address for subscription is not reachable or wrongly specified, or notification cannot be delivered.

To check if subscription is active, sending Heartbeat messages has to be configured for each subscription during request.

**VisitNumber element** can have only one of two values: 1 or 999, where 1 is typical value, and 999 appears in cancelled stop calls.

**Cancellations of calls and trains in Vehicle Monitoring service.** `VehicleActivityCancellation` structure is sent whenever train is cancelled on whole journey for both Request/Response and Publish/Subscribe patterns. Structure is also sent in Publish/Subscribe pattern when train has finished journey or data is moved out of application's memory. In all cases reason is given in XML choice element.

When train stops are cancelled it appears in output with `VisitNumber` equal to 999. When `ArrivalStatus` or `DepartureStatus` is available, it will say that call is cancelled as well.

**TrainBecomes and TrainSwitches elements contain 00:00 instead of hour and minute part.**

Trains are still able to be identified because there can be only one train number (first part of `DatedVehicleJourneyRef`) a day.

## **8 Attachments**

WSDL and schema files set downloaded from Kizoom and adjusted.

Code example of creation of application in JAVA.